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Details of military medical administratio...

Joseph Herbert Ford

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HEADQUARTERS AMERICAN EXPEDITIONARY F

France, November 16,

INFORMATION AS TO UNIFORM AND EQUIPMENT F OFFICERS IN FRANCE

Uniform and equipment for officers are prescribed in U. R. wit reference to paragraphs 29, 92 and 93, and to parts III and IV; in C tion of G. O. W. D. Par. 318 and in G. O. 39, W. D., 1915. Table X

Field allowance of baggage is given in A. R. 1123 and 1136, as mo Telegram No. 7323 W. D., June 25, 1917. The latter provides:

(a.) That the allowances prescribed for grades above captain sh everything necessary;

(b.) That the allowance for grades below major, and for contract s acting dental surgeons, and veterinaries, shall be 250 pounds; and sh everything necessary, except horse equipment.

The uniform and equipment for field service are prescribed for France. (Attention to Note 3, page 66, U. R., which prescribes, for fie the leather belt and attachments for certain officers.)

Omit O. D. cotton and mosquito head nets.

Only cavalry officers on duty with troops armed with the saber w sabers.

Add the following garrison articles: cap, riding gloves, and son shirts, collars and cuffs. Illuminated dials on watch and compass are d There should be:

a camp chair;
a lamp, or lantern, for oil or gasoline;
a flash light (with extra batteries);
a fountain pen, paper and envelopes;
a canvas or rubber tub, for sponge bath.

Bedding should include:

4 blankets;
1 comfortable.

Clothing should include:

Heavy and medium weight, O. D. wool, uniform;
Light and heavy wool sox;
Cotton and heavy wool underwear;
An overcoat, wool lined;
A vest of leather or flannel;
A knitted toque;
1 pr. rubber hip boots, with moccasins reaching the ankle;

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This book presented

to

Stanford School of Medicine

by

R. W. O'Bannon, M. D.
(Retired)

Hollister California

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DETAILS OF

MILITARY MEDICAL ADMINISTRATION

FORD

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Second Edition, July, 1918

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THIS

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My Devoted Wife

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INTRODUCTION

WAR DEPARTMENT
OFFICE OF THE SURGEON GENERAL
WASHINGTON, D. C.

August 21, 1917.

COLONEL J. H. FORD, MEDICAL CORPS,
CAMP FUNSTON,
LEON SPRINGS, TEXAS.

Dear Colonel Ford:

It gives me a great deal of pleasure to express my approval of your work. Your personal experience with the war in Europe is particularly valuable, and publishing the book now, just as our own army is going abroad, I think, is specially apt and appropriate. I hope every medical officer in our service will furnish himself with a copy.

With kindest regards, I remain yours

Very sincerely,

W. C. GORGAS,
SURGEON GENERAL, U. S. ARMY.

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PREFACE TO THE SECOND EDITION

As the author has been preoccupied with official duties, the first revision of this book had to be confined simply in the insertion of those orders, etc., which modify the original text and which are believed to be of greatest general interest to medical officers.

The limitation of this method, similar to that in which army regulations are kept up to date, is apparent, but it is the best available under the circumstances, and ensures a prime purpose—conformity of this work to current orders.

The inserted material is found on those pages which form Appendix II. The superseded ruling is in the body of the book as before, but it is now marked on the margin of the page by the word "superseded" and at the bottom of the page directions are given just where to find the corresponding material in the Appendix. In the Appendix itself the number of the page on which the old or superseded ruling appears is given along with a key-letter. Example, p. 10 in book is p. 10a in Appendix.

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PREFACE TO THE FIRST EDITION

The method of administering the Medical Department as a whole and the general principles, with some details, governing the administration of its elements are prescribed in Army Regulations, the Manual for the Medical Department, the Field Service Regulations, and in orders, bulletins, and other documents published from the offices of the Adjutant General or Surgeon General of the Army. This work considers some of the administrative methods adopted by subordinate medical officers in their efforts to comply with these publications.

The author has a keen recollection of the difficulties attending his early attempts to observe official technicalities. His omissions and other mistakes were both a source of humiliation to himself and of annoyance to his superior officers. It was primarily because of his remembrance of those mistakes that this book was written, in the hope that it may help the novice to avoid the most common errors, and to indicate in greater detail than the Manual for the Medical Department, how some official duties are discharged. The chapters on the regimental surgeon, the post surgeon, malingering, and the illustrative copies of blank forms, properly filled out, will probably be those of greatest immediate value to the medical officer newly entering the service.

The work is a compendium of information gathered from many sources, both at home and abroad. Some apposite information is based on foreign literature, some on the author's observation in Europe before and during this war, but all data drawn from those sources are clearly designated so that there may be no confusion of foreign methods with ours. They are noted, however, in order to indicate useful methods. For obvious reasons, however, much the greater part of the text pertains to the American Army.

One object of the work has been to bring together in one book, some of the information scattered through the many official publications of the Army, Navy and Public Health Service. Army officers will find in the regulations of these latter services much information that would be of direct value to them. Data from these sources have been supplemented by notes from the published articles or unpublished memoranda of a number of medical officers, peculiarly well qualified to discuss the subjects they consider.

The regulations, orders, etc., here collected illustrate the mechanism of administration, the methods of official procedure and the ends they

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seek to attain. Some of them are applicable only under certain circumstances. They indicate, however, in a synoptic manner, some of the points which most commonly have required administrative action—and the nature of the action taken. Though the experienced administrator prefers to promulgate his own rules and methods of procedure, as occasion arises, he also sometimes finds of interest the gradually developed regulations and methods of other organizations.

It is a pleasure to acknowledge the assistance that has been so freely granted by those who have assisted in the compilation of this work. Further and more explicit acknowledgment is made in the text where published articles or memoranda are quoted.

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MILITARY MEDICAL ADMINISTRATION

CHAPTER I

GENERAL PRINCIPLES OF MILITARY MEDICAL ADMINISTRATION

Military medical administration is the method of performing the duties incident to the execution of the laws, regulations and orders affecting the Medical Department of the Army. These are prescribed as stated in the Preface. The efficiency of such administration is determined solely by the results which it obtains. There exists in regulations a basic legal fiction, that every one affected by them is fully acquainted with them. A corollary to this is the assumption that those vested with authority under them know how it should be exercised. Regulations are technical and exacting, in order that they themselves may provide against omissions and other defects in administration. Their expansion, however, if excessive, is not unfraught with danger for it robs subordinate officers of initiative, by diminishing their authority and prestige, and tends to confuse ends with means, essentials with non-essentials. This fact is recognized by the Field Service Regulations of the German Army which emphasize the importance of giving subordinate commanders the greatest practical latitude.

Officers occupying administrative positions attempt by the issuance of orders and other such measures to comply with regulations and to this end are vested with adequate authority in order that they may control the situations presented, and incidentally develop their own administrative ability.

By the term "Army Regulations" is commonly meant the consolidated administrative rules for the government of the Army. They are formulated by authority of the President, and are published from time to time, under his direction, by the Secretary of War.

In general terms it may be said that Regulations are divisible into the following classes:

"1. Those that have received the sanction of Congress. These are really legislative enactments and cannot be changed or altered by executive authority unless these enactments themselves so provide. They are of equal force with any other statutes, and can only be changed, modified or repealed by legislation.

"2. Those made pursuant to, or in execution of, a statute, which are supplemental thereto and which, in the absence of sufficient legislative regulations, prescribe means for carrying it out. These may be modified within the limits of the provisions of the act, by the executive authority; but as they all have the force of the legal enactments to which they conform

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they cannot be changed or modified except in accordance with the provisions thereof, and until so modified they are as binding on the authority that promulgated them as on others; nor can exceptions to them in individual cases legally be made.

"3. Those emanating from, and depending on, the constitutional authority of the President, as Commander-in-Chief of the Army and as Chief Executive, but not made in conformity with some particular statute. These are the most numerous. The authority that makes them can modify or suspend them as to any case, or class of cases, or generally, *e.g.*, the maximum penalties provided for some offenses in the Manual for Courts-Martial. These regulations emanating from, or depending on, the constitutional power of the President as Commander-in-Chief and in his duty as Executive 'to take care that the laws be faithfully executed,' have the force of law, and they are binding upon all within the sphere of his legal and constitutional authority." (Dudley.) Those parts of the regulations found in the book officially designated as "Regulations" are but a fraction of the regulations that actually obtain in the service.

The Army Regulations in the book of that name are indeed but a synopsis of the rules governing the military establishment, a framework on which the other rules having the force of regulations are built up or to which they are appended. Thus, the manuals prescribed for the various staff departments and approved by the Secretary of War have equal force with regulations. The manual issued for the Medical Department is in effect a specialized work on a particular field of regulations. It discusses in much detail many matters not considered, or considered very briefly in the Regulations proper, but all its provisions are in furtherance of the provisions of the latter. Other manuals of great importance to the medical officer are the Field Service Regulations, the Manual for Courts-Martial and the Drill Regulations for Sanitary Troops.

Other appendages to the regulations (as that term is generally understood) are those instructions which are promulgated on the blank forms furnished by the War Department. Some such forms contain no instructions, but others contain them in great detail. Many of the provisions set forth on these forms are copied verbatim, in whole or in part, from paragraphs already published in the regulations proper or in the manuals, and in other respects as well are in accordance with the provisions of these books. New forms or alterations are not made without authority of the Secretary of War. Manuscript returns, rolls, certificates and other documents are prohibited when the proper printed forms are on hand.

Orders covering specific details of medical administration are issued as occasion arises from the office of The Adjutant General or that of the Surgeon General.

The regulations of the Army comprise both these written rules governing the military service, above mentioned, and also others known as the customs of the service. These unwritten laws consist of principles, customs and usages, derived from immemorial service in time of peace or war.

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Their power is recognized in the Articles of War and they are therein made applicable in the administration of justice, in case of doubt not explained in those articles. These customs must, however, have the sanction of long, unquestioned and continuous usage. When this is the case they are to be observed by courts-martial, unless manifestly wrong by reason of being in conflict with a statute or contrary to the precepts of morality and humanity. "Usage does not alter law, but is evidence of the construction given it." It does not have the force and character of unwritten law until by "immemorial and undisputed" usage it has become a custom of war which is entitled to be received as a part of the common law of the Army, and until it does become so it cannot be pleaded, except in mitigation of punishment. "Evidence of *local custom* is not admissible, unless it is shown to be known to both parties." These unwritten laws and regulations are gradually being crystallized into written ones. As society becomes as a whole, more complex, statutory enactments become necessary to replace tradition, customs, and court decisions belonging to an anterior stage of civilization or to give them more definite expression. Also, both the written and unwritten regulations are gradually being modified and each successive edition of the written regulations, in some respects, differs from those previously issued. Some of these changes are published from time to time in "Changes in Army Regulations" and forecast the changes that may be expected in successive editions of that book. Others grow up as changes in official methods. "The decisions and opinions of the heads of departments of the government in matters which properly come before them relating to the military establishment, though not in themselves regulations, are intended to give interpretation of them, and, as an aid in forming judgment, it is generally safer and better to adopt them" (Dudley).

Not infrequently one hears disparagement of what is ordinarily called the rigidity, and stiffness of army administration and of the exactitude which is made to govern official actions. While ample latitude is allowed, within the limits of subordination to personal initiative and personal talent, many men unacquainted with the service, disparage it because of the methods of official procedure imposed. The more elaborate and highly developed an organization becomes, the more exact, thorough, and detailed must be that body of rules which govern its affairs and those of its members, in order that friction or conflict between its component parts may be diminished, and that final authority may be centralized.

An Army of to-day differs as much from the army of Attila, in complexity, as does the government of the United States from that of his nomadic Huns. The greater amount of regulation necessary for the transaction of Army business, is but an expression of the high degree of organization in the service, and of the necessity, for purposes of routine administration, that all parts work coherently.

All large corporations have methods of operation highly similar to those that obtain in the Army. So far from obstructing business, such methods, if properly followed, expedite it, while departures from it, obstruct it by the

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confusion which they occasion. Army Regulations prescribing these methods are the product of gradual evolution, and though at first sight many of them may appear unnecessary, a longer acquaintance with them will show that all are the product of that best school of instruction—experience,—and that each subserves a specific purpose. Their number and their scope, however, should be as limited as circumstances permit, especially for armies in the field.

Various blank forms are employed in the military service. Their purposes are essentially the following: to secure desired data in a uniform manner from all sources from which such data are required; to indicate as far as possible to those employing these forms what data are desired on the subject in hand; to eliminate irrelevant data from the subject in hand; to avoid unnecessary writing; to expedite both the presentation of facts and action thereon; and to so systematize methods of official procedure that appropriate action may clearly be indicated. System, method, and orderliness are prime essentials in coherent administration. The methods employed to secure them should be as simple as possible. The object remains, the means for its attainment are changed with changing conditions.

While the importance of regulations is manifest, compliance with their letter alone is by no means the most important part of ones official duties. The limitations of their usefulness must be fully recognized. They are a means, not an end. They exist only that through them efficient service may be secured. Whenever they obstruct the accomplishment of that end they are alienated from their proper purpose and become pernicious. The fewer they are and the simpler the better. Formalism for formality's sake alone is to be deplored. No man should be a mere automaton. Regulations are evolved, indeed, in order that they may serve the specific purposes noted above, and having done that they may then secure to him who uses them a large opportunity for the development of his individuality, the promotion of the welfare of those under his care, and the intelligent coördinated development of situations which may arise. When properly formulated and used they do not preclude great professional or official activity; they leave the way clearer for it.

It is apparent that in the application of regulations to the transaction of public business one must avoid the Scylla of official laxity and the Charybdis of narrow formalism. A golden mean is desirable and is obtainable. A due proportionate estimate of the situation must always be kept in view.

The preparation of reports, records and returns is generally considered as administrative work. This is an error. Such documents are in fact merely the clerical expression of administrative methods, *e.g.*, of their nature and the eventuating status. The real administrative work is effected by orders, circulars, memoranda, letters of instruction, etc., while the reports and returns merely indicate to higher authorities how such methods have succeeded. Often, however, they are the basis for administrative action of these authorities and for that reason must be not

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only accurate in detail but complete in scope. Reports are of less value than results. There exists to-day a laudable disposition to simplify military official procedures, reducing letters, reports and returns to a minimum, and replacing them as far as possible by man-to-man conversations and by frequent inspections. The same data are obtained for administrative action as formerly, but they are gathered in a simple, more direct and more effective manner. Whenever administration methods can be simplified this should be done, especially in the field.

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CHAPTER II

THE MEDICAL OFFICER'S VOCATIONS

The medical officer must practise two vocations. He must have a thorough knowledge not only of the science and art of medicine, but also of those military subjects which affect his administrative, executive and advisory duties. The services of the physicians of higher rank in the army are to a large degree rather for the command than for the individual. They aim to promote this welfare of the troops by collective general measures. "From a cold military standpoint the care of the well and strong is more important than the care of the ill and feeble" (Kean). To prevent ingress of the unfit, to keep the well in good health and to eliminate from the mobile forces those who become disabled, are the most important duties of the military surgeon at the front. This subordination of a patient's interests is shocking to humanitarian and professional instincts and sympathies, but it is inevitable in the stern activities of war. However, there remains ample scope for humanitarian activities as in the care and treatment of the sick and wounded, behind the firing line, and every effort is made to promote, by skilled and devoted care the welfare of every patient.

The medical officer requires for the performance of his administrative duties, indicated in the Manual for the Medical Department, a thorough knowledge of military hygiene, sanitation surgery, preventive medicine, public health service, including quarantine, the organization and utilization of sanitary units (*e.g.* detachments, ambulance companies, field hospitals, trains and ships), map reading, the range of modern weapons, trajectory of projectiles, military law, customs of the service, obtainment, issuance and care of supplies, and preparation of accurate records and of numerous highly technical reports and returns.

To further particularize it is apparent, that, in addition to his professional work, the military surgeon in command of a hospital company or unit has to provide for the subsistence, shelter and care of his patients, for the subsistence, shelter, clothing, and general welfare of the personnel of his command, for the care and transportation of the sick and wounded, maintain discipline among patients and attendants, instruct his assistants in their duties and attend to their pay. He must therefore be thoroughly familiar with the methods of obtaining, issuing and caring for all supplies, whether shelter, clothing, medicines, foodstuffs, etc., with methods of hospital administration, etc. If a physician, however eminent in his profession but without preliminary training, is suddenly called upon to discharge highly technical administrative duties, the sick and wounded under his care will inevitably suffer because of his inability to secure the

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supplies necessary for their welfare, to utilize them to the best advantage, and to properly organize and discipline his personnel.

While the medical officer must know something about tactical formations and the part played by the combatant troops in war, it is just as necessary that the line officer should have a general idea of the part played by the Medical Department. Without teamwork there is much lost motion. The line officer should realize the importance of the administrative work of the Medical Department in maintaining the physical fitness of troops and in removing the retarding sick and wounded. His coöperation is essential to the promotion of the welfare of both the sick and the well.

Some of the more important works with which a medical officer should acquaint himself are the following: "Army Regulations," "Field Service Regulations," "Manual for the Medical Department," "Drill Regulations of the Medical Department," "Manual for Courts-Martial," "Manual for Army Cooks," Mason's "Handbook for the Hospital Corps," Straub's "Medical Service in Campaign," Morrison and Munson's "Study in Troop Leading and Management of the Sanitary Service in War," Munson's "Sanitary Tactics," Sherill's "Map Reading," Moss's "Officers Manual," Lelean's "Sanitation in War," Havard's "Military Hygiene," and La Garde's "Military Surgery." A War Bibiliography compiled by the Massachusetts General Hospital contains the titles of the most valuable recent contributions to military medical knowledge. It comprises medical, surgical, and sanitary subjects as well as those of a medico-military character.

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CHAPTER III

THE REGIMENTAL SURGEON

This chapter was written almost entirely by Major Roy C. Heflebower, M.C. Certain modifications have been necessitated by recent orders and other material has been added, but the chapter remains largely as originally written and quite as originally arranged.

Each regimental sanitary unit is provided with copies of certain manuals and therefore many subjects here considered, have been abridged and reference made to those manuals or regulations, where more comprehensive discussions may be found. An explanation of the letters used in this text, to indicate these manuals, is found at the end of this chapter. With regard to such subjects as methods of the disposal of wastes, personal hygiene, etc., on which no reference works may be available, more definite instructions are given.

Since the military establishment is a highly complex machine, and runs smoothly only when each integral part is efficiently administered, there is necessity for orders, regulations and reports, each of which serves its definite purpose (see Chapter I). The Regimental Surgeon should first learn: *what he has to do, where he can find* the procedure outlined, and then consult manuals, etc., in order to learn *how* it is to be accomplished. To illustrate: Certain reports must be rendered each month. The surgeon should become as familiar with them as possible, but should not attempt to memorize all the regulations governing these reports. This knowledge comes best with practice. When the time comes to render a report, he should read carefully the instructions on the blank form employed and any other regulations and orders concerning it given in the Army Regulations or Manuals. The hypothetical copies in the back of this book may be consulted. The report prepared, he should check it to see if it conforms to the instructions, regulations, etc. The officer who adopts this method will soon find that he has learned "paper work" in easy stages, without experiencing that dismay which faces him who aims first to learn the theoretical side of that subject.

DUTIES OF MEDICAL OFFICERS

In addition to the practice of medicine, the medical officer has administrative and advisory duties. Pars. 361, 362, 363, 634, M.M.D.; 1386, 1387, A.R.

The Regimental Surgeon is responsible for the proper performance of all work of his detachment, but inasmuch as he delegates the actual supervision of some of this work to his juniors, and may be succeeded by them, it is highly important that they acquaint themselves with his responsibilities.

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The surgeon in his administrative capacity is directly responsible to the Commanding Officer for the condition and efficiency of the detachment of sanitary troops which he commands.

ADMINISTRATIVE DUTIES

Specifically he is charged with:

(*a*) The training, discipline, efficiency and assignment to their duties of the personnel and the supervision of the internal economy of his organization.

(*b*) The maintenance of the equipment in proper condition by requisition for supplies needed and by the proper care of property on hand.

(*c*) The keeping of the prescribed records and the making of the prescribed reports and returns.

ADVISORY DUTIES

In an advisory capacity he must:

(*a*) Keep himself informed of existing conditions and, especially in the case of a moving command, of those conditions which may be anticipated, and which bear upon the health and physical efficiency of the command.

(*b*) Familiarize himself at all times with the instruction of the command in personal hygiene and military sanitation and urge the providing of facilities for maintaining good sanitary conditions. In so far as they have a bearing upon the physical condition of the troops, he should make appropriate recommendations concerning the equipment of individuals and organizations, the sanitary condition of buildings or other shelter occupied by troops, the character and preparation of food, the suitability of clothing, the disposal of waste, and the disposition of the sick and wounded, including action on requests for leave or furlough on account of sickness.

When necessary, he recommends to the proper officer such immediate action as he believes to be essential to the health of the troops.

While the Regimental Surgeon is responsible for pointing out unsanitary conditions and making proper recommendations for their correction, the Regimental Commander is directly responsible that corrective measures be employed.

The surgeon should bend his first and chief efforts toward the correction of *real* sanitary faults, that is, faults which actually have produced, or are likely to produce, disease, rather than toward the correction of theoretical defects, which, though objectionable in principle, are nevertheless inert, have caused no sickness and show no likelihood of causing any. Par. 182, M.M.D.

Duties as a Physician.—Duties relative to the care of the sick and injured differ from those of civil practitioners. They differ more in war than in peace. The military surgeon has a dual obligation—one to the patient, the other to the government. In battle, while every possible effort should be exerted toward the mitigation of suffering, the military situation is the prime consideration, and questions of humanity must be subordinated to tactical requirements.

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Duties as Instructor.—A very important duty is the instruction of the command in first aid, personal hygiene and the elements of field sanitation. Medical officers are also required to perform "such other duties as may be required of them by proper authority." This includes the physical examinations of officers and enlisted men (including recruits) duties as members of boards and courts-martial, etc.

An officer should not question the propriety of any specific duties assigned him. He should first of all obey orders and afterward should look the matter up carefully and seek redress in the proper manner, if he believes he has a grievance.

EQUIPMENT OF MEDICAL OFFICERS

To be Purchased by the Officer

Article		Can be Purchased at
Clothing		
Service hat, with cord sewed on	1	Any Military Tailor or Supply Co.
Service coat, olive drab[1]	2	
Service breeches, olive drab, pairs[1]	2	
Puttees, russet leather, or pigskin, pairs	1	
Shoes, russet leather, high, pairs	2	
Shoe laces, extra pairs	2	Any gentlemen's furnishing store or The Quartermaster Department.
Undershirts	4	
Drawers, pairs	4	
Socks, woolen, pairs	6	
Sweater, olive drab (optional)	1	
Gloves, regulation riding, pairs	1	
Gloves, woolen, O.D., pairs	1	Any Military Supply Co. or The Quartermaster Department.
Shirts, flannel, olive drab	2	
Slicker	1	
Belt, web, waist	1	
Overcoat, olive drab (or Mackinaw, fur-lined Coat, allowed in some camps.)		Any Military Tailor or Supply Co.
Equipment		
Bedding roll, canvas	1	Any Military Supply Co. or The Quartermaster Department.
Blankets, olive drab	2	
Clothing roll, canvas[2]	1	
Cot	1	
Bars, mosquito or headnet	1	
Basin, canvas	1	
Bucket, canvas	1	
Canteen, aluminum	1	
Canteen cover, mounted	1	
Cup, aluminum	1	Any Military Supply Co. or The Ordnance Department.
Fork	1	
Knife	1	
Spoon	1	
Meat can, aluminum	1	
Pouch for first-aid packet	1	
Identification tag with tape	2	Quartermaster Department.
Locker, trunk	1	

[1] Cotton or woolen depending on the season.

[2] A combination bedding and clothing roll is allowed.

See Appendix II—10a.

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Article	
Miscellaneous	
Comb	1
Toothbrush	1
Mirror	1
Towels	3
Soap	
Toilet paper	
Watch	1
Notebook	1
Pencils	2
Lantern, folding (with candles)	1
Brush, hair	1
Handkerchiefs	6
Message book, blank	1
Rations, reserve	2

FURNISHED BY THE GOVERNMENT

Article		Furnished By
Horse[1]	1	
Horseshoe nails	16	
Horseshoes, fitted, (1 hind, 1 fore)	2	Quartermaster Department.
Tents, shelter, mounted, complete	1	
Tents, wall, small, complete	1	
Horse Equipments[1]		
Spurs with straps, pairs	1	
Saddle, (McClellan or Whitman)	1	
Bridle, combination, complete	1	
Saddle blanket	1	
Saddlebags, pairs	1	
Saddlecloth with insignia	1	
Surcingle	1	
Feed bag	1	Ordnance Department.
Horse brush	1	
Currycomb	1	
Lariat	1	
Picket pin	1	
Ration bags	3	
Grain bags	1	
Individual Equipment		
Belt, web, for medical officers	1	
Case, instrument	1	
Case, medicine	1	
Diagnosis tags, books	1	
Flask, empty, for morphine solution	1	Medical Department.
Syringe, hypodermic	1	
Syringe, hypodermic, extra needles, for	12	
Thermometer, clinical	1	
Packet, first-aid	1	

[1] Furnished to officers below the grade of major; others must purchase. Pars. 1272 and 1273, A.R.

Officers above the grade of captain are furnished with wall tents, and captains and lieutenants with shelter tents, except when in semi-permanent or maneuver camps when all officers are furnished with wall tents.

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Baggage, Personal.—Telegram, War Department, July 14, 1917, reads as follows:

Until further orders troops designated for duty with expeditionary forces in Europe may take with them to port of debarkation the following personal baggage:

1. (*a*) Each officer above the grade of captain, the field allowance given in paragraph 1136, Army regulations, 1913. This allowance includes equipment C, professional books, and all necessary clothing and bedding for extended field service.

(*b*) Each officer below the grade of major and each contract surgeon, acting dental surgeon, and veterinarian, 250 pounds. This allowance includes equipment C (exclusive of horse equipment), professional books, and all necessary clothing and bedding for extended field service.

(*c*) Each noncommissioned officer down to include color sergeant, and each civilian employee of the classified service, not exceeding 100 pounds in weight. This allowance is in addition to equipment C, and shall include with equipment C all necessary clothing and bedding for extended field service.

(*d*) Each enlisted man below the grade of color sergeant and each civilian employee not in the classified service shall be allowed not to exceed 75 pounds of baggage in addition to equipment C, the two together embracing all clothing and bedding necessary for extended field service.

2. Containers for personal baggage shall be as follows:

First, for officers, contract surgeons, acting dental surgeons, veterinarians, and civilian employees, the standard trunk locker and bedding rolls or their equivalent in similar containers.

Second, for all enlisted men, the standard barrack bag, or its equivalent.

Brassards.—In campaign, all medical officers wear on the left arm a brassard bearing a red cross on a white ground, the emblem of the sanitary service of armies. These are furnished by the Medical Department, and are procured in the same way as other medical property. Each is numbered and the number is made of record. Par. 542, M.M.D.; 61, U.R.

(The wearing of brassards is falling into disuse in the British army as the enemy does not respect them and they draw hostile fire.)

Cravats.—When off duty, in permanent and maneuver camps, and out of camp, when the service uniform with the olive drab shirt without coat is authorized, officers wear a plain black cravat, tied as a four-in-hand. Any other style or color of cravat is forbidden. Par. 74, U.R.

The foregoing lists contain only those articles which every officer is required to have by regulation or which are essential to his comfort. Under existing regulations, an officer's personal baggage—exclusive of that carried on the person or on his mount—is restricted to that carried in the bedding and clothing roll, the maximum weight of which is limited to fifty pounds. The regulations state that "baggage allowances are in no way intended to restrict the amounts of tentage, baggage, etc., that may be required in permanent and semi-permanent camps in time of peace or war. These

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allowances fix definitely the amounts that are to be carried in the baggage section in time of war and peace."

Accordingly when in semi-permanent or permanent camps, officers may have their trunk lockers and many other articles which will add to their comfort and contentment; while on the march, and in temporary camps, when the amount of baggage is limited, larger and heavier articles such as cots, mattresses and trunk lockers must be left behind, and the amount of clothing may have to be reduced.

An officer should take into the field everything essential to his comfort that can be carried without exceeding his baggage allowance. It is unwise to deny himself comforts in the field with the idea of becoming hardened. As Moss so aptly says: "Experience has shown that to undergo avoidable hardships does not enable one to stand unavoidable ones any better."

Extra Articles.—The following list is but a reminder of certain articles that may prove valuable. It is not suggested that any officer should provide himself with all of them, but that he should make selections therefrom according to his personal taste and the conditions under which he is to serve.

Bag barrack
Bedding: Thin felt or pneumatic mattress or a bedsack, thin cotton or pneumatic pillow or a pillow sack, sheets, pillow cases.
Boots, rubber (hip rubber boots are used in the trenches)
Candles
Chair, folding camp
Clothes hanger
Housewife
Knife, pocket
Matches
Slippers
Soap box
Night cap
Stationery and writing materials
Toilet articles, including shaving outfit
Tunic
Wall pocket

The following extracts from a letter from an American Officer with the expeditionary forces in France are quoted. These are the personal observations of the officer during the brief space of one month.

Climate in France.—Cool; seldom over 75 or 80F. in summer; frequent rains, some foggy weather in summer and many cloudy days; cool in the shade; near the sea cool at night.

Take a good supply of stationery, three-cent stamps, pipes, cigars, cigarettes, tobacco, dental floss, tooth powder, a housewife, vaseline, razor-hone and strop, etc.; as may be individually desired. Tobacco, soap, and other toilet articles may be bought in France, but they are of English or French manufacture and are high in price. Paper is very high. French stamps are not used by our troops; we have our own mail service. There is no duty on the articles taken in with troops.

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Purchase at the point of embarkation enough fruit, tobacco, newspapers and magazines for a sea voyage of ten or fifteen days.

Take about $100 in paper money. Take company fund *in cash* (paper). Paper can be changed into French money for 5.60 francs to the dollar at the Banque de France at the present time. At the shops one does not get so much.

Officers' Pay.—Officers are paid in France at the same rate of pay as per American dollar at present. The rate of exchange may fluctuate. Officers can make out their pay vouchers in the States before leaving. They should be sent to the Quartermaster General in Washington with a request that when due they be paid by the Depot Quartermaster in Washington, D. C., to the person or bank to whom assigned. An officer on oversea service or about to be, may allot all or part of his pay (A. R. 1259½) on form 38*a* Q. M. C. (see page 733 *et. seq.*). Take blank pay vouchers with you. One or two New York banks are preparing to open establishments in Paris for the use of the Army. Don't depend on sending checks from Paris to America; they may become lost. On short notice money may be cabled to America but this is expensive. Each officer should have a check account with a trust company, use a Western Union Code, and register this with the Western Union Company. All business should be settled before leaving the United States.

Enlisted Men's Equipment.—Equipment *B* should be taken, excepting mosquito nets. The clothing should be about the same as worn in the Northern States. Khaki not advised. Take one or more old uniforms or suits of fatigue clothes for use on the boat or on the way over and for dirty work in camp or billet. Clothing and equipment should be completely furnished men before starting. It is difficult or impossible to get them in France. Hat cords should be sewed on. Take extra shoe strings. All men are allowed barrack bags. Sergeants are allowed trunk lockers in France.

Enlisted Men's Pay.—The men are paid in French money in France. They can allot their pay to persons or banks in the States. They can deposit their pay also.

Company Equipment and Property Responsibility.—A company's equipment should be complete before leaving the States. All property papers should be in proper order before starting. Take a typewriter and a generous supply of blanks of all kinds. Stationery and envelopes and blanks are hard to get in France. A great deal of tentage, property records and rations have been lost on the way or stolen by the ship's crew while at sea.

Marking Personal Property and All Company Baggage.—It is absolutely necessary to mark with stencils all company baggage and personal property to prevent its being lost. Barrack bags should not be tagged. The tags tear off. They should be marked with white paint and a brush with the company number, company letter and regimental number. Organizations have lost many tents, surplus kits and barrack bags. Much of this was due to faulty and careless handling at the port of embarkation. The property

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was unloaded from the cars onto barges and scows by strange crews and dock employees, and then onto the ships, hence a hopeless mixup.

Mail.—Mail goes from the States at varying intervals. It is sent through our own lines of communication to the troops. All mail from France is censored. The regulations governing censorship will be issued to troops upon arriving here. Picture postcards, films, or photographs cannot be sent to the States. Cameras are not to be used. In addressing letters to troops in France, send them as follows: Captain John Smith, First Infantry with the American Expeditionary Forces in France, "In care of the Postmaster, New York City" or Via Hdqrs. Eastern Dept. Governor's Island, New York, N. Y., may be added. Have all magazines and all newspapers address changed before leaving the States. Magazines and papers from America are very high in France.

Cables.—Weekend cablegrams over the Western Union may be sent from France to the States. All cablegrams from France go to London by mail and are cabled there. All cablegrams are censored. To cable to anyone in France address him thus: "Captain John Smith, First Infantry, Amexforce, London." Cablegrams cost six cents per word to New York, seven cents anywhere else along the Atlantic coast, eight cents per word to Chicago and El Paso and Central West and nine cents per word to San Francisco and Pacific Coast points. All words including address and signature are counted.

Laundry.—Is done reasonably in France by laundries and private families.

Fruits, Pastries, Etc.—Fruits are plentiful in France in summer and reasonable in price. Cherries, peaches, pears, apricots, melons, apples and figs. Oranges imported from Spain. French pastries are excellently prepared. There is little ice cream.

Sherbets are exceptional.

Water is polluted, and needs boiling or chlorination.

Confidential Data.—Many data of this nature are available upon application to the Army Service Schools at Fort Leavenworth.

Drills on Transport on Journey Over Sea.—Physical drills, fire drills, "abandon ship" drills. Instruction also given to officers and noncommissioned officers in taking down, assembling, naming parts, and uses of pistols, machine guns, rifles, etc. Officers' classes in evening on "Trench Warfare," French, etc.

As the basis of a lecture on "Uniform and Equipment Recommended for Service Abroad," delivered by Capt. K. C. Masteller, C.A.C., at the Reserve Officers' Training Camp at Fort Monroe, Va., there was prepared a list of articles considered necessary for such service. It was compiled from two different British lists, a reference to our own Army orders on the subject and other information from various sources. The list is as follows, prices being given first; the figures in parentheses indicate the requirements of War Department orders; prices are unit prices.

See Appendix II—15a.

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1. Ordnance Equipment: $0.20, (1) can, bacon; $0.13, (1) can, condiment; $0.61, (1) canteen; $0.58 (1) canteen cover; $0.35 (1) cup; $0.07, (1) fork; $0.12, (1) knife; $0.07, (1) spoon; $0.48, (1) meat can; $2.90, (1) haversack; $0.72, (1) pack carrier; $0.16, (1) pouch for first aid packet; to be purchased by officer from Ordnance Department.

(1) pistol, (1) pistol holster, (1) pistol belt, (1) pocket, web, double, (2) extra magazines; need not be purchased; furnished by Ordnance Department through organization.

2. Quartermaster Supplies: $2.29, (1) mosquito bar; $2.74, (1) poncho (or slicker); $4.03, 1 trunk locker; $2.06 (1) cot (gold medal not recommended); $3.08, (2) blankets; $6.52, (1) bedding roll; $2.97, 1 clothing roll; to be purchased by officer from depot quartermaster, Philadelphia, or of a post quartermaster.

(1) shelter tent, poles and pins; to be furnished by quartermaster through organization.

3. Clothing: $2.38, 3 (2) flannel shirts; $2.81, 3 (1) shoes; $0.13, 12 (5) pair socks, light wool; $0.47, (1) leggins, canvas; $0.01, 2 (1) identification tag and tape; $0.01, 12 (2) pair shoe laces; $2.38, 2 (1) cotton uniforms; $0.10, (1) waist belt; $1.23, 1 leather gloves; $0.33, 1 O.D. gloves; 1 winter gloves; $9.04, (1) overcoat; can be purchased from quartermaster; $25, 1 raincoat, with detachable warm lining (British Burbery); $25, 2 (1) woolen uniforms; $10, 1 leggins, leather; $3.50, 1 puttees; $5, 2 (1) hat; 2 (1) hat cord; $18, 1 heavy high-laced shoes; $6, 1 rubber boots (hip); $0.26, 3 heavy woolen socks; 6 undershirts (3 wool, 3 cotton); 6 drawers (3 wool, 3 cotton); $1, 1 waist belt, leather; $1, 1 sneakers; $5, 1 sleeveless sweater (Red Cross pattern); $0.25, 12 khaki colored handkerchiefs; 2 pajamas, flannel; 6 towels (face and bath); 3 abdominal bandages.

4. Signal Corps Equipment: $33.25, (1) field glasses, Type E.E.

5. Medical Department: (1) first aid packet (procure from hospital).

6. Miscellaneous; $7, 1 mattress, light weight; 1 pillow; 1 quilt; $42, (1 sleeping bag); $0.75, 2 laundry bags; 2 pillow cases; $4, 1 cot (collapsible recommended instead of gold medal); (1) basin, canvas; (1) bucket, canvas; $4, (1) lantern, folding, aluminum; 12 candles, 6's; $2, 1 folding chair, 36 ins.; (1) whistle, for infantry; $1.50, (1) compass, with luminous dial; (1) wrist watch (with luminous dial, unbreakable crystal, and waterproof); (1) housewife; 1 tool kit; 1 wire cutters; 1 hatchet; 1 assorted nails; 1 hunting knife; 1 corkscrew, 1 can opener; 1 protractor; 1 pocket electric lamp with refills; 1 map case, celluloid, waterproof and light; 1 Sterno stove and refills; 1 Red Cross model knitted hood; 1 supply rolled wax paper for trench fires; 1 supply of matches; 1 pipe lighter; 1 gasoline vapor lantern; canned solidified alcohol; tobacco for two months; 1 collapsible table and stool; 1 flint wheel and tinder cigar lighter; 3 (1) pencils; (1) note book; 1 fountain pen; 1 jack knife; 1 supply Parker's ink tablets; 2 clothes hooks for tent pole; 30 feet small rope; 1 periscope; (1) supply of toilet paper; 1 medicine case and medicines; 1 toilet case (canvas) with (1) carbolic (soap); (1) metal mirror; (1) hair brush; (1) tooth brush;

See Appendix II—16a.

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1 soap box; 1 nail brush; (1) comb; (1) tooth powder (not paste); 1 shaving soap (not paste); 1 writing materials; writing paper and stamped envelopes, official paper and official envelopes, pay vouchers, mileage vouchers, telegraph blanks; 1 emergency ration; 1 supply Cash's woven names to be put on clothing; 1 supply cheesecloth carbolated underwear (put up by English Red Cross for vermin); 1 pocket dictionary French-English.

Officers carry in the field a 2-foot locker, bed roll and a small hand bag or clothing roll.

British List Suggested for Officers' Mess for 5: 3 aluminum sauce pans of different sizes; 1 aluminum frying pan; 1 iron kettle. Enamelled or aluminum—6 cups, 6 glasses, 1 teapot, 1 milkjug (lid), 1 butter dish (lid), 1 sugar (lid), 12 plates; 12 rustless steel knives; 12 plated spoons; 12 plated forks; 8 small spoons; 1 carving knife and fork; 1 mincing machine; 1 white oil cloth; squares of muslin with beads on edge to cover food dishes; washing cloths; drying towels; 2 Primus stoves; 2 wicker baskets to carry above.

(*a*) Vermin Protection No 1: 90 per cent. Naphthalene and 10 per cent. good soft soap. Apply locally and to seams of garments.

(*b*) Vermin Protection No. 2: A paste made of vaseline and a little soft soap and 30 per cent. cresol. A dirty mess but better than powders. Apply sparingly to skin and put on seams of garments particularly between the legs.

(*c*) Protection against Colds, etc.: A tablet of Chlorazene in water. Gargle or nose spray. A powerful antiseptic which does not destroy tissue. Is extensively used as an antiseptic in hospitals at the front. Can be procured from Abbott Laboratory, Eleventh street, New York.

(*d*) Purifying Water: Halazone tablets. Procurable same place as (*c*) above.

Gas Masks: New American masks will give perfect protection. Must be applied quickly. Will probaby be issued.

The sleeping bag is considered essential by many foreign officers. It is not recommended.

This list was made up from two different British lists; a reference to our own orders on the subject, and from other information from various sources.

Pistol and Ammunition.—Medical officers are not required to provide themselves with pistol and ammunition, but they may carry the same when necessary for their own protection. (U.R., page 67.)

Field Glass and Compass.—Medical officers, unless on duty with sanitary units in the field, are not required to provide themselves with field glass and compass. Regimental sanitary detachments are not considered "sanitary units," and, consequently, regimental medical officers are not required to have these articles, although there is no objection to their doing so. (U.R., page 67.)

See Appendix II—17a.

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PERSONAL REPORTS AND RETURNS TO BE MADE BY MEDICAL OFFICERS

Name of report	Form	No. of copies	To whom sent	Remarks
Monthly				
Personal report.....	Letter	3	2 to S.G. through D.S., 1 retained	See Pars. 12 and 13, M.M.D.; Par. 827, A.R.
Pay voucher.....	336 W.D.	2	2 to Q.M. making payment	See "Payments to Officers" in A.R.
Semiannually				
Return of horse equipment.	18a, O.D.	2	1 to chief of ordinance, 1 retained	For Lieutenants and Captains only, vouchers to accompany.
Annually				
Statement of preferences... (Discontinued during the war)	423, A.G.O.	1	To the A.G. direct	See instructions on form.
Occasionally				
Report of change of station or status.	Letter	3	2 to S.G. through D.S., 1 retained	See Pars. 12 and 13, M.M.D.; Par. 826 and 827, A.R.
Report of change of station.	Letter	1	To the A.G. direct	See Par. 827, A.R.
Designation of beneficiary..	T.D.Bureau of War Risk Insurance Form 2	1	To the Bureau of War Risk Insurance direct	G. O. governing insurance
Special reports of interesting cases	Letter	1	To the S.G. through medical channels	See Pars. 421 and 422, M.M.D.

Professional Papers.—Medical officers are forbidden to publish professional papers requiring reference to official records or to experience gained in the discharge of their official duties without the previous authority of the Surgeon General. Par. 423, M.M.D.

PHOTOGRAPHS, OFFICERS

Officers Requested to Furnish Photographs. (Bulletin No. 36, July 3, 1917.)

II. From time to time officers have been requested to forward their photographs for file with their records. Only about 80 per cent. have responded, and many of those heretofore forwarded are not now up to date.

When officers are promoted, detailed on important duties, etc., many requests are received at the department for their photographs for publication.

It has been decided, on appropriate occasions, to grant these requests, and in order that up-to-date photographs may be furnished, each officer is requested to forward, as soon as practicable, a recent photograph for file with his record.

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Such photographs should be taken in uniform, be unmounted, not more than 4 inches in width and 6 inches in height, and upon the back should be plainly written the name, rank, and organization of the officer, and as nearly as possible the date when taken. It should be forwarded without letter of transmittal to The Adjutant General of the Army, and the envelope marked in the upper left-hand corner "Photograph." (2620719, A. G. O.)

Private Mounts of Officers. (G.O. 113, W.D. 1917.)

V. During the present emergency the following instructions relating to private mounts of officers will govern:

1. So much of paragraph 1272, Army Regulations, as prescribes that "all field officers of the mobile army serving with troops are required to own and provide their mounts," is suspended. Private mounts, acquired after the date of receipt of this order by officers other than those holding permanent commissions in the Regular Army, will not be maintained at public expense.

2. Officers below the grade of major in the National Guard, National Army, Officers' Reserve Corps, or holding temporary commissions in the Regular Army, who acquire private mounts after the date of receipt of this order, are not authorized to have such mounts maintained at public expense, or to receive additional pay therefor.

3. Officers of all branches of the military service not owning private mounts and whose duties require them to be mounted will be issued suitable mounts by the Quartermaster Corps under orders from commanders of departments, divisions, and separate brigades. (454.11, A.G.O.)

QUARTERS

Duty With Troops in the Field During Present War not Temporary Duty. (Bulletin No. 35, June 15, 1917.)

II. All duty with troops of any kind in the field, at home or abroad, during the present war, will be considered as not temporary duty in the field in contemplation of the act of Congress approved February 27, 1893, which provides that officers temporarily absent on duty in the field shall not lose their right to quarters or commutation thereof at their permanent stations while so temporarily absent. Under this decision no officer or enlisted man on duty in the field can have any official station elsewhere, within the meaning and contemplation of the laws and regulations relating to the allowance of quarters or commutation thereof, but while on such duty his rights as to quarters will be as prescribed for field service. (2607909A, A.G.O.)

THE REGIMENTAL SANITARY DETACHMENT

The duties connected with the administration of the detachment of sanitary troops on duty with a regiment are so numerous and diverse that it would be impossible to include a full discussion of all of them here. Only the more important ones are discussed below in alphabetical order.

See Appendix II—19a.

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Accounts of Enlisted Men.—The accounts of the enlisted men of the Medical Department on duty with the regiment are kept by the Regimental Surgeon, who is personally responsible for any error made in them.

A memorandum record, either a book or a card index system, should be kept, and in it should be entered under the name of the man, everything that affects his pay. The latter includes court-martial sentences, sicknesses (not in the line of duty), stoppages for losses of equipment, etc., (see chapter on "Post Surgeon"). This record is an informal one, intended as a reminder at the end of the month, when reports and returns must be made. The description of every man, including date of enlistment, record of deposits, and clothing allowance due soldier and amounts due U.S. for clothing drawn, is kept on his service record.

Clothing and Equipment, Enlisted Men.—A duty of vital importance is that of keeping the enlisted men of the detachment properly clothed and clothing equipped.

CLOTHING

The following orders relate to clothing for enlisted men during the present emergency:

Clothing Allowance of Soldiers. (General Orders, No. 89, July 11, 1917.)

The President of the United States directs that during the period of the existing emergency a soldier's allowance for clothing will be the quantity of clothing necessary and adequate for the service upon which he is engaged.

Organization commanders will be held responsible for rigid economy in issues and for the proper equipment of enlisted men of their commands with the allowances prescribed as equipment C, in table for quartermaster supplies.

Articles lost or destroyed through neglect will be charged on the payroll against the man responsible therefor.

Articles which have been damaged or rendered unserviceable will be repaired if practicable or replaced by others.

The clothing allowance of retired enlisted men, as established by law, is given in paragraph 137, Army Regulations, and is not changed by this order.

This order will be effective on and after July 15, 1917. (2560336B, A.G.O.)

Care and Disposition of Used Clothing. (General Orders, No. 97, July 23, 1917).

1. In view of the provisions of War Department Order No. 89 of 1917, and the opinion of the Judge Advocate General of November 4, 1916 (Bul. 55, W.D., 1916), department quartermasters will, under the direction of department commanders, make arrangements for disinfecting, cleaning, repairing, pressing, and repacking articles of uniform clothing and for its reissue by facilities in the immediate vicinity of post, camp, or cantonment, or by collecting articles and sending them to a general depot of the

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Quartermaster Corps, designated for the purpose, whenever the facilities are not available in the immediate vicinity of the post or station. After the garments are renovated they will be carefully pressed and if necessary resized and packed.

2. Commanding officers will utilize all articles of clothing in the most economical manner by continuing the issue of old stock as long as it can be made serviceable.

3. Clothing will be issued to organization commanders on memorandum receipt as prescribed in Par. 681–A, Army Regulations, 1913, for articles of equipment C. Enlisted men to whom the clothing is issued will be required to receipt for the articles on individual personal equipment slips (Q.M.C. Form No. 501). No entries of such issues will be made on the soldier's service record (Form No. 22, A.G.O.). Issues will be based on the allowances for equipment C, specified for field service. The issue of additional articles will be authorized by department commanders when the necessities of the service require.

4. The provisions of Par. 215, Compilation of Orders, 1881–1915, relating to quartermaster property in the hands of enlisted men changing stations will apply to clothing issued to enlisted men under the provisions of this order, except that the list of the clothing will be on a separate slip attached to the service record instead of being noted on the form itself.

5. Organization commanders will be allowed to retain in their possession extra clothing not to exceed 5 per cent. of the requirements of their command.

6. All serviceable clothing turned in as required by Par. 1161½, Army Regulations, will be at once thoroughly disinfected, repaired, pressed, and packed for reissue. Repairs only of articles in the possession of enlisted man will be made at the expense of the Government. The cleaning and laundering of garments in their possession will be done at their expense, and they will be required to keep the garments in their possession as clean as practicable, consistent with the service they are performing. Articles lost or damaged through carelessness will be charged against the men responsible for such loss or damage.

7. In case any article becomes unserviceable through fair wear and tear, the enlisted man may exchange the same under the supervision of the commanding officer without expense.

8. Clothing turned in to the quartermaster and found not worth the cost of further repairs or renovation will be submitted to the action of an inspector.

9. An enlisted man will be allowed to retain for his own use while in active service all clothing in his possession on July 15, 1917, but no further issues will be made to him until the quantity he had on hand on that date is reduced below the quantity authorized for equipment C. (246.5, A.G.O.)

(General Orders No. 119, September 11, 1917.)

111. General Orders No. 89, War Department, July 11, 1917, provide that commencing July 15, 1917, and continuing during the existing emergency, a soldier's allowance for clothing will be the quantity of clothing necessary

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and adequate for the service upon which he is engaged. Such order, in effect, suspends the money allowance for clothing of all enlisted men in active Federal service on July 14, 1917, as of and including that date, after which and commencing with July 15, 1917, an allowance of clothing in kind is provided.

The money clothing accounts of all soldiers in active Federal service on July 14, 1917, will be settled as of that date under the provisions of Pars. 1160, 1161, or 1162, Army Regulations, as though, for the purpose of such settlement, the men were separated from active service on such date. If in the settlement of July 14, 1917, the soldier is found indebted to the United States, this indebtedness will be reduced by an amount equal to the clothing allowance for the six months ending December 31, 1917, had such money allowances been continued in force to that date, less the amount already credited for the period July 1 to 14, 1917, inclusive, or so much of said difference as is necessary to cover the indebtedness. If the settlement, after deducting this credit, still shows indebtedness to the United States, the amount of such indebtedness will be entered on the next payrolls and collected. Any amount found due the soldier for clothing not drawn in kind will not be credited on payrolls, but will be entered on his service record and credited on his final statements upon his separation from active service by discharge, furlough to the reserve, muster out, or otherwise.

No credit will be given a soldier on his money clothing account, for serviceable clothing in his possession on July 14, 1917, which was drawn and charged against his clothing account on or before that date, regardless of whether he retains such clothing in his possession or is required to turn it in to a quartermaster. (246.5 A.G.O.)

Cotton O.D. clothing will not be discarded because it is faded, if otherwise serviceable.

The repairing of shoes will be done by the Regimental Supply Officer with the facilities provided by the War Department. Organizations less than regimental units that are not provided with shoe repair equipment will arrange to have the shoe repair work done at the nearest depot or organization having equipment for this purpose.

Extract from telegram, War Department, July 14, 1917.

"Containers for personal baggage shall be as follows:

'For all enlisted men, the standard barrack bag, or its equivalent. Troops designated for over-seas service will be provided with at least two suits of olive drab woolen clothing, light wool socks, overcoats, field shoes, winter gloves, wool underwear, and three blankets each. Mosquito bars, head nets, and khaki clothing will not be taken."

Record Sizes of Clothing.—A record is kept in each detachment, of the sizes of the clothing required for each enlisted man thereof as ascertained by actual trial of the various articles of clothing. Par. 37, U.R.

If the proper sizes cannot be obtained by actual trial, the tables published in the Annual Price List of Clothing and Equipage will be con-

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sulted by the surgeon in the preparation and maintenance of the soldier's record.

One "size stick" will be furnished by the Quartermaster Corps, upon duly approved requisitions, for use in measuring the feet of enlisted men with a view to determining the correct sizes of shoes required. Two shoe stretchers will be furnished for use whenever necessary, in the same manner.

CLOTHING AND EQUIPMENT, ENLISTED MEN

The following lists contain every article of equipment and clothing that an enlisted man of the Medical Department is required to have in the field. The designations, "A," "B" and "C," are those prescribed in general orders, and are fully explained under the caption, "Regimental Sanitary Equipment."

CLOTHING

Table of Fundamental Allowances

Article	A	B	C	Source	Remarks
Belt, waist, web	1	...	1	Q.M.D.	
Breeches, olive drab, pairs (*a*)	1	1	2	"	
Coat, olive drab (*a*)	1	1	2	"	
Cord, hat	1	...	1	"	
Drawers, pairs (*a*)	2	1	3	"	
Gloves, riding, foot, pairs	1	...	1	"	For mounted men only.
Gloves, woolen, pairs	1	...	1	"	For dismounted men.
Hat, service, with tying cord	1	...	1	"	
Laces, leggin, extra pairs	1	1	2	"	
Laces, shoe, extra pairs	1	1	2	"	
Leggins, canvas, foot, pairs	1	...	1	"	For dismounted men.
Leggins, canvas, mounted, pairs	1	...	1	"	For mounted men.
Ornaments, collar, bronze	1		1	"	
Ornaments, bronze letters US	1		1	"	
Shirts, flannel, olive drab	1	1	2	"	
Shoes, marching, pairs	1	1	2	"	
Stockings, woolen, pairs	3	2	5	"	
Tag, identification	2	...	2	"	
Tape, for identification tag	1	...	1	"	
Undershirts (*a*)	2	1	3	"	
Poncho	1	...	1	"	For dismounted men.
Slicker	1	...	1	"	For mounted men; ambulance drivers and ambulance orderlies.

(*a*) Weight depends on season.

TOILET ARTICLES

Table of Fundamental Allowances

Comb	1		1	Q M.D.	Issued gratuitously to each recruit upon his first enlistment. Must be replenished by soldier at his own expense.
Soap	1		1	"	
Toothbrush	1		1	"	
Towels, face	1		1	"	

See Appendix II—22a.

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Additional Articles Not Required But Recommended

Razor....1
Shaving brush....1
Shaving soap....1
Shoe brush....1
Shoe polish....1

The clothing of enlisted men and their toilet articles are divided into three groups, viz.: that worn on the person; the *field kit*, or that carried on the person by dismounted men, and on the packed saddle by mounted men; and the *surplus kit*, which pertains to Equipment "B," and is forwarded to troops when serving in instruction, maneuver, mobilization, or concentration camps, or when, in active service, a temporary suspension of operations permits the troops to refit. General Order 56, 1915.

The field and surplus kits constitute the clothing component of the *service kit*.

The articles belonging to each of these kits are shown below:

Field kit	Surplus kit
1 blanket	1 breeches, pair
1 comb	1 drawers, pair
1 drawers, pair	1 laces, leggin, extra pair
1 laces, leggin, extra pair	1 shirt, flannel, olive drab
1 laces, shoe, extra pair	1 shoes, marching, pair
1 poncho (dismounted man)	1 shoe laces, extra pair
1 slicker (mounted man)	1 undershirt
1 soap, cake	2 stockings, pairs
2 stockings, pairs	
1 toothbrush	
1 towel, face	
1 housewife, 1 to each squad	
1 undershirt	

INDIVIDUAL EQUIPMENT

Par. 865, 907, M.M.D.

Article	A	B	C	Source
Belt, web, (Med. Dept.)	1		1	M.D.
Belt, web, (Med. Dept.), contents of	1		1	M.D.
Bandages, gauze, compressed	6			
Gauze, sublimated, packages	2			
Individual dressing packets	10			
Iodine swabs, 6 in box, boxes	2			
Pins, common, papers	¼			
Pins, safety, dozen	1			
Plaster, adhesive, spools	1			
Spiritus ammoniæ aromaticus, in flask	1			
Tourniquet, field	1			
Brassard	1		1	M.D.
Can, bacon	1		1	O.D.
Can, condiment	1		1	"
Canteen, aluminum, with cup	1		1	"
Canteen cover, dismounted (*a*)	1		1	"

(*a*) Carried on belt when dismounted; in pommel pockets when mounted.

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INDIVIDUAL EQUIPMENT (*Continued*)

Par. 865, 907, M.M.D.

Article	A	B	C	Source
First-aid packet, in metal case	1		1	M.D.
Fork	1		1	O.D.
Hand-axe, Infantry	1		1	"
Hand-axe carrier	1		1	"
Hanger, double, web, for canteen	1		1	"
Knife	1		1	"
Meat can	1		1	"
Pouch for diagnosis tags and instruments	1		1	"
Contents: Case, linen or canvas, containing	1		1	M.D.
Forceps, dressing 1, scissors, dressing 1, pencil, lead 1, tags, diagnosis book 1.				
Pouch for first-aid packet	1		1	O.D.
Rations, reserve (as ordered)	...	...	...	Q.M.D.
Ration bags, Cavalry, pairs	1		1	O.D.
Shelter tent half	1		1	Q.M.D.
Shelter tent pole	1		1	"
Shelter tent pins	5		5	"
Spoon	1		1	O.D.
Bar, mosquito, single (one for every two men)	1		1	Q.M.D.
Bed sack	...	1	1	Q.M.D.
Blankets, olive drab	1	1	2	"
Cot		1	1	"
Headnet, mosquito (only when ordered)	1		1	"
Overcoat (for winter use only)	1		1	"

D. HORSE EQUIPMENT

(*a*) Furnished by the Ordnance Department

Par. 943, M.M.D.

Bridle, cavalry	1	Picket pin	1
Carrier strap	1	Picket pin carrier, special	1
Cooling strap	1	Pommel pockets, pairs	1
Currycomb	1	Ration bag retaining strap	1
Feed bag	1	Saddle	1
Grain bag	1	Saddle blanket	1
Horse brush	1	Spur, pairs	1
Lariat	1	Spur straps, sets	1

NOTE.—With each equipment there is issued 1 halter and 1 halter tie rope or strap for stable use and, when necessary, 1 horse cover.

(*b*) Furnished by the Quartermaster Department

Shoes, horse, 1 hind and 1 fore, fitted 2
Nails, horseshoe 16

Brassards.—In time of war all enlisted men of the Medical Department will wear on the left arm a brassard bearing a red cross on a white ground, the emblem of the sanitary service of armies. These are furnished

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by the Medical Department. Each is numbered and the numbers made of record. Par. 542, M.M.D., Par. 61, U.R. (See page 12.)

Cravats.—When off duty, in permanent and maneuver camps, and out of camp, when the service uniform with the olive drab shirt without coat is authorized, enlisted men will wear a plain black cravat, tied as a four-in-hand. No other style or color of cravat will be worn. Par. 74, U.R.

Identification Tags.—Par. 491 A.R. as amended reads as follows:

Superseded.

491. (*a*) Two aluminum identification tags, each the size of a silver half dollar and of suitable thickness, stamped with the name, rank, company, regiment, or corps of the wearer, will be worn by each officer and enlisted man of the Army whenever the field kit is worn; one tag to be suspended from the neck underneath the clothing by a cord or thong passed through a small hole in the tag, the second tag to be suspended from the first one by a short piece of string or tape. These tags are prescribed as a part of the uniform and when not worn as directed herein will be habitually kept in the possession of the owner.

(*b*) In order to secure, as far as possible, the decent interment of those who fall in battle and to establish beyond doubt their identity should it become desirable subsequently to disinter the remains for removal to a national or post cemetery or for shipment home, it is the duty of commanding generals to set apart a suitable spot near every battlefield, and to cause the remains of the killed to be interred therein. The identification tag worn around the neck of the officer or enlisted man stamped with the name, rank, company, and regiment or corps of the wearer will in all cases be interred with the body. The duplicate tag attached thereto will be removed at time of burial and turned over to the Surgeon or person in charge of the burial from which a record of the same, together with the cause and date of death, shall be made and reported to the commanding officer. It is the duty of the commanding officer to cause to be made a sketch as accurate as the means at hand will permit of the burying places of those falling in battle and when practicable to have each grave marked with a temporary headboard.

Identification Tags (General Orders, No. 80, June 30, 1917).

IV. General Orders, No. 204, War Department, 1906, is rescinded and the following substituted therefor:

Identification tags to be worn as prescribed in Par. 491, Army Regulations, 1913, as changed by C.A.R. No. 58, W.D., 1917, will be issued by the Quartermaster Corps gratuitously to enlisted men and at cost price to officers.

Gratuitous issues will be limited to two tags to an enlistment, but in the event that the tags are lost through no fault of the soldier they will be replaced gratuitously. Should the loss of the tags be due to the fault of the soldier, they will be charged to him upon his clothing account at cost price.

Steel dies for stamping the tags (each set to consist of one die for each letter of the alphabet and one for each Arabic numeral from 0 to 9, inclusive), will be furnished by the Ordnance Department to each organization commander on requisition. (2616543, A.G.O.)

See Appendix II—26a.

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DEATHS OF MEDICAL DEPARTMENT PERSONNEL

When a member of the detachment—commissioned or enlisted—dies, the surgeon has certain duties to perform, in connection with the effects of the deceased, and certain reports to render, in addition to those required to be rendered in the event of the death of any member of the regiment, discussed below under "The Care of the Sick and Wounded."

Medical Officers.—In the event of the death of a medical officer, the surgeon will immediately report the fact of the death direct to the Department Surgeon, and at the same time send a copy of this report direct to the Surgeon General. A report should also be sent to the Division Surgeon, though this point is not covered in regulations. Par. 219, M.M.D.

The surgeon will also report the fact of the death, with place, cause, day and hour, without delay, by telegraph, direct to The Adjutant General of the Army, and to the brigade and department commanders. This report will also show whether or not the death was from wounds or disease contracted in line of duty, and whether or not his death was from wounds or disease the result of his own misconduct. Par. 83, A.R.

Sergeants, First Class.—When a Master Hospital Sergeant, Hospital Sergeant or Sergeant, First Class, dies, the same reports must be made to the Department Surgeon and the Surgeon General, as in the case of medical officers (*vide supra*). In time of war this report is made to the Division Surgeon also. Par. 218, M.M.D.

Other Enlisted Men.—Upon the death of an enlisted member of the detachment, his accounts must be closed and the following reports made by the surgeon and transmitted to the War Department through channels. Par. 162½, A.R.

1. Report of cause of death, whether or not incurred in line of duty, and whether result of soldier's misconduct (through military channels).
2. One final statement. Form No. 370, W.D.
3. Inventories of effects in duplicate. Form No. 34, A.G.O.

Medical Officers and Enlisted Men.—In the event of the death of a member of the detachment—commissioned or enlisted—it will be the duty of the surgeon to secure his effects, and immediately notify the nearest relative of the fact of the death. Par. 162, A.R.

Effects of Deceased Persons.—Inventories in duplicate of the effects of deceased officers or soliders will be transmitted to the Adjutant General of the Army. Pars. 84, 85, 163, A.R.; 112, A.W.

If the legal representatives of the deceased are present, deliver the effects of the latter to them. Otherwise, send a list of the effects to the nearest relative. If the effects are not claimed within a reasonable time, they will be converted into cash by the summary court, not earlier than thirty days after date of death, and the net proceeds, with any cash belonging to the deceased, will be deposited with a quartermaster of the army. Duplicate receipts will be taken, one of which will be sent to the Adjutant General of the Army.

Superseded.

See Appendix II—27a.

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DEMOTION

Master Hospital Sergeants, Hospital Sergeants, and Sergeants, First Class, except those of the latter grade holding limited warrants, though liable to discharge, will not be reduced except by sentence of a court-martial. Sergeants, corporals, lance corporals, cooks and privates, first class, may be reduced by sentence of a court-martial, by the Surgeon General, by a Department Surgeon, or by the Division Surgeon of a mobilized division. Par. 1407, A.R.

In the event that the surgeon considers a noncommissioned officer, except a sergeant, first class or higher N.C.O., deserving of reduction, he should write a letter recommending such a change and stating his reasons therefore to the proper authority. A letter of this nature should be sent through medical and not official channels.

DESERTION

Should an enlisted man absent himself, without leave from the regimental commander or the surgeon, he is guilty of "absence without leave." Should the surgeon have reason to believe that the man does not intend to return, or should the man not return or be apprehended, he is reported as a deserter from the time of commencement of his unauthorized absence. Par. 132, A.R.

When a man deserts, the following steps are to be taken:

(*a*) Notify the regimental commander of the desertion, giving the full name of the man, with date of enlistment and date and place of desertion. Par. 119, A.R.

(*b*) Ascertain whether any public property has been lost in consequence of the desertion, and, if so, call for a Board of Survey, to act on such property. Par. 116, A.R.

(*c*) Turn over the clothing abandoned by the deserter, to the quartermaster, with a certificate showing its condition and the name of the man to whom it belonged. Par. 117, A.R.

(*d*) If the deserter has an allotment running, the surgeon reports as promptly as possible to the Quartermaster General, the names of the grantees whose allotments thus cease. Par. 1350, A.R.

(*e*) Settle the man's clothing account in accordance with the provisions of the paragraphs referred to above. Par. 1164, A.R (This regulation is in abeyance during this war.)

(*f*) Report the fact of the desertion to the Surgeon General through the Department Surgeon. Par. 45, M.M.D.

A deserter forfeits all pay and allowances due him at the date of desertion, and will not receive pay until his offense has been investigated by a court-martial, or he has been restored to duty without trial, or the charge has been set aside as having been made erroneously. Pars. 1372 to 1373, A.R.

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DISCHARGE

An enlisted man cannot be discharged before expiration of his term of service, except by order of higher authority as specified in regulations. Pars. 139 to 158, A.R.

Upon discharge, the soldier's accounts will be settled and he will be furnished with:

(*a*) Final statements (Form 370, W.D.) in duplicate.

(*b*) Discharge certificate.

The fact of discharge will be reported at once to the Surgeon General through the Department Surgeon. The report (to be forwarded in duplicate) will show: first, the soldier's character given on discharge; second, objections to his reënlistment, if there are any, otherwise, the fact that there are none; third, his physical condition, good or poor; fourth, whether he is single or married; fifth, his mail address; and sixth, such other information as may be pertinent. Par. 45*a*, M.M.D.

DISCIPLINE

The discipline of an organization may be defined as its training in obedience and efficiency. "All persons in the military service are required to obey strictly and execute promptly all the lawful orders of their superiors."

Articles of War.—The laws for the government of the Army are known as the Articles of War, and have been enacted by Congress into Statue Law. They are quoted and discussed in the Manual for Courts-Martial.

Enforcement of Discipline.—The Surgeon is responsible for the discipline of his detachment, and while he must be firm he must be kind and just, never tyrannical, capricious or abusive. The successful officer is he who without relaxing the bonds of discipline, treats his men so that they preserve their self-respect, and builds up such relations of confidence and sympathy as will insure the free approach of his men to him for counsel and assistance.

Owing to the peculiar nature of their duties, the discipline of the Medical Department is often less rigid than that of the line. Daily drill should be practised. It is an excellent means of teaching discipline.

"Discipline should be administered so far as possible without recourse to courts-martial. Men who might make good soldiers if properly handled may be ruined by having the first court-martial entered on their records. Extra fatigue, deprivation of passes, etc., should be used to the fullest extent before resorting to court-martial in order to maintain discipline. The office of noncommissioned officer should be magnified, and a sharp line of demarcation between noncommissioned officers and privates maintained. The necessity, under military administration, for a sharp differentiation between those in whom authority, in varying degrees, is vested, is not at first evident to the civilian, as a rule, nor is the nature of the line of demarcation plain. Its clearness depends on individuals and conditions.

See Appendix II—29a.

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Measures which prove suitable in the hands of one man to prevent that familiarity which breeds contempt are not adequate in the hands of another. The idea that severity of manner and gruffness in dealing with subordinates are indispensable to discipline is erroneous. Forceful men of coarse nature sometimes manifest such characteristics in their maintenance of discipline, but forceful men of high breeding find no difficulty in attaining their ends without such means. Those who, in dealing with those inferior in rank, assume a superiority one hour, which they do not themselves feel and which they forget to assume the next, make dismal failures as disciplinarians. It is needless to remark that an appreciation of a line between the noncommissioned officers and the privates cannot be developed unless the line between the officers and noncommissioned officers is also maintained" (Persons).

Men cannot be punished for disobedience of illegal orders, and hence, the question arises regarding who is to judge the legality of the order. There is but one safe rule to follow, viz., *obey the order*, and subsequently seek redress. If the inferior disputes the legality of the order before compliance, he has committed an offense which is not mitigated by the fact that the order was illegal.

In punishing infractions, the degree and character of the penalty depend upon the nature of the offense. Offenses which are the result of ignorance or thoughtlessness should be more leniently dealt with than deliberate disregard for, or disobedience of, orders or regulations. Punishments must conform to law and should promptly and invariably follow derelictions of duty. Their purpose should be deterrent and not vindictive.

Disciplinary Punishments.—The detachment commander may impose disciplinary punishments upon persons of his command without the intervention of a court-martial for minor offenses, not denied by the accused, unless the latter demands trial by court-martial. Par. 104, A.W.; Par. 333, Manual for *Courts-Martial.*

Disciplinary punishments include admonition, reprimand, withholding of privileges, extra fatigue, and restriction to certain specified limits, but should not include forfeiture of pay or confinement under guard without trial. A person so punished has the right to appeal, through the proper channel, to the next higher authority, but may in the meantime be required to undergo the punishment adjudged.

For each punishment awarded, a brief record must be made showing the name of the accused; the nature, and time and place of the offense; statement as to whether or not the accused demanded trial by court-martial; date and punishment awarded; and certain other data in case an appeal is made. Par. 334, Manual for *Courts-Martial.*

Courts-Martial.—When the infraction is of a serious nature, or when minor derelictions have been frequent, and disciplinary measures have been tried in vain, resort must be had to a court-martial. The composition and powers of courts-martial are fully discussed in the Manual on that subject.

See Appendix II—30a.

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Submission of Charges.—Charges are prepared in triplicate, using the prescribed charge sheet (Form 594, A.G.O.) as a first sheet and using such additional sheets of ordinary paper as are required. They are forwarded by the Surgeon to the Regimental Commander and are accompanied: (*a*) Except when trial is to be had by a summary court, by a brief statement of the substance of all material testimony expected from each material witness, both those for the prosecution and those for the defense; and (*b*) in the case of a soldier, by properly authenticated evidence of convictions, if any, of an offense or offenses committed by him during his current enlistment, and within one year next preceding the date of the alleged commission by him of any offenses set forth in the charges.

In the preparation of charges, the directions given in the Manual for Courts-Martial (Appendix 4) should be followed carefully.

ENLISTMENTS

Original enlistments in the Medical Department are made in the grade of private. No enlistments or reënlistments will be made without obtaining special authority from the Surgeon General or the Department Surgeon. Par. 1410, A.R.; Par. 40, M.M.D.

A married man will not be enlisted as private and no enlisted man below the grade of sergeant, first class, who is married will be reënlisted in the Medical Department without special authority from the Surgeon General. Par. 1412, A.R.

The enlistment papers of all men enlisting or reënlisting in the Medical Department will be forwarded direct to The Adjutant General. A copy of the service record card, or in the absence of such card, a copy of the Service Record, should be sent direct to the Surgeon General by the medical officer who first receives the man. Par. 41, M.M.D.

FURLOUGHS

When an enlisted man of the Medical Department desires to take a leave of absence, he first consults the surgeon, and if the latter approves, the man addresses a letter to the proper officer (see Army Regulations) requesting a furlough. Pars. 106, 113, 1229, 1233, 1234, 1236, 1237, 1238 and 1111½, A.R.

The paragraphs referred to explain fully the regulations governing the question of furloughs, and they should be carefully read before the surgeon puts his indorsement upon an application.

Under the present laws, at the conclusion of a certain portion of a man's service, he may be furloughed to the Army Reserve. The regulations governing furlough to the Reserve are published in general orders a copy of which will always be available at regimental headquarters. Pars. 1361, 1362, 1366, 1375, 1376, 1377, 1378, 1379, A.R.; Comp. G.O., W.D., Art. XXXII.

See Appendix II—31a.

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HOSPITAL FUND

The Hospital Fund which consists of the gross amounts of money received from the commutation of rations of patients; from savings on rations of the enlisted personnel of the Medical Department; from dividends from the post exchange; and from money received from the subsistence of officers and civilians treated in hospital, is received by the surgeon and is disbursed by him solely for the benefit of the enlisted personnel of his detachment and of the sick in hospital. Pars. 248 to 262, M.M.D.; Pars. 317 to 327, A.R.

A Hospital Fund is considered as a Company Fund, within the meaning of Army Regulations, except that the duplicate statements of the Hospital Fund will constitute the council book required in the case of company funds. The proceedings of the hospital council will be recorded on the duplicate statement, as prescribed by Par. 318, A.R., extra sheets being inserted for the record when necessary. Pars. IV, G.O., 67, 1914.

At the end of each month, after the fund has been audited by the hospital council (which consists of the three senior medical officers on duty with the regiment, or as many as are available, if less than three) the surgeon will forward a statement of it, on Form 49, M.D. to the Department Surgeon, accompanied by the prescribed vouchers. Pars. 260 to 262, M.M.D.

INSTRUCTION

The efficiency of the regimental sanitary detachment is to be judged by its ability at any moment, to take the field and meet successfully every phase of its war service. This naturally implies that at all times the individual and organization equipments must be kept in proper condition, and that each member of the detachment must be thoroughly trained in the performance of the duties assigned to him. Par. 156, M.M.D.

The surgeon is allowed great latitude in the choice of ways and means for training his personnel, but is held responsible for the results obtained. A definite program of instruction should be planned, published and carefully followed. The course should be coördinated with the daily duties to be performed, and, when practicable, the instruction in certain subjects should occur simultaneously with them. For example: the animals must be fed, watered and groomed, and the stables policed each morning. Consequently, there is no better time for the instruction in the Care of Animals, and this can be followed by Equitation. Again the daily dressings of minor injuries of men of the regiment can be made at the hour set for instruction in First Aid.

The conditions of service with different regiments will vary, and much must be left to the discretion of the surgeon. He knows in what respects his detachment is deficient, and should, therefore, give these defects most attention. The following is but a suggested arrangement of the subjects which should be taught and the time which should be devoted to each.

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INSTRUCTION DAILY, EXCEPT SATURDAY AND SUNDAY

Pars. 168 to 170, 172 to 181, M.M.D.

MORNING

Setting-up exercises..... 15 minutes
Breakfast
Police of Detachment Camp
Stables and Care of Animals..... 30 minutes
Equitation..... 30 minutes
Rest period
Drill..... 1 hour
Foot and litter drill: Transportation of patients, on litter in ambulance, without litter
Tent pitching
Loading of the pack mule
Instruction in nomenclature and use of parts of the pack-saddle
Establishment of Regimental Aid Stations

AFTERNOON

Instruction in First Aid..... 45 minutes
- Uses of First-Aid Packets
- Treatment of bullet wounds
- Treatment of shell wounds
- Treatment of shrapnel wounds
- Treatment of hemorrhage
- Gas poisoning
- Fractures
- Wounds from cutting weapons
- Trench warfare

Instruction in Field Sanitary Appliances..... 45 minutes
- Construction and care of incinerators
- Construction and care of latrines

Instruction in Field Work..... 1 hour

Men should march across country and be taught how to orient themselves by means of a compass, a watch, and by location of prominent points. The determination of protection from fire, as influencing the location of a first-aid station, should be taught. Also such subjects as destruction of fly and mosquito-breeding areas are instructive, and if properly demonstrated, will be interesting to the men. The men need frequent practice in marching, lest when they have to accompany the regiment on a march, they be not in the proper physical condition to do so.

Saturday.—After stables, a half hour is allowed the men to get ready for inspection. This function includes their clothing and equipments, the infirmary, the ambulances, animals and picket lines and tents. If any irregularities are found, have the man or men responsible correct them and report when this is done.

On Saturday afternoon and Sundays the men should be allowed as much freedom as possible, only the absolutely necessary work being required. On other days, at least four hours daily should be devoted to the instruction of newly raised detachments.

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A common fault in the instruction of regimental sanitary detachments is to excuse too many men from attendance. There is usually no reason why more than one noncommissioned officer and one man should ever be excused from an instruction period. Usually the former only will be all that is necessary. Noncommissioned officers of the Medical Department are loath to take these courses, and will frequently raise the point that they are excused therefrom by regulations. They are excused from certain *Garrison Courses* if they are "Qualified" in the subject, but there is nothing in regulations or orders that excuses a noncommissioned officer of the Medical Department from any instruction course in field work that the surgeon deems expedient to conduct. The presence of noncommissioned officers should be required for it is their duty to assist in the instruction.

MILITARY CORRESPONDENCE

An official letter should refer to one subject only. Letters of transmittal will be used only when necessary, and when used must refer only to the matter transmitted; none are required with rolls, returns, estimates, requisitions, or periodical reports. Telegrams will be followed by official copies sent by first mail in cases of financial transactions of more than trifling importance and in cases in which chiefs of bureaus of the War Department may deem it necessary themselves to send, or to require officers serving under their immediate control to send to them, such copies. Par. 775, A. R.

Letters are to be written, folded, numbered, briefed, marked, and signed; indorsements will be written, numbered, and signed; and inclosures will be numbered and marked as prescribed in orders from the War Department.

Copies of the orders (G.O. 23, 1912; Bul. 24, 1912; G.O. 53, 1913) prescribing the details regarding correspondence will seldom be available in the field, the more essential features are, therefore, discussed here as the subject is important. Par. 776, A.R.

Method of Writing Letters.—1. *Heading, Subject, and Number.*—The letter will begin with the place and date; below this, beginning at the left margin, will come the word "From," followed by the official designation of the writer or, in the absence of any official designation, the name of the writer with his rank and regiment, corps, or department; below this, also beginning at the left margin, will come the word "To," followed by the official designation or name of the person addressed. Next will come the subject of the communication, indicated as briefly as possible and is not to exceed ten words. The words "From," "To," and "Subject," will begin on the same vertical line. The sending office number of the communication will appear in the upper left-hand corner.

In case of letter paper, the upper third, and in the case of foolscap, the upper fourth of the sheet, will be devoted solely to the matter described in this paragraph (see Par. 7).

2. *Body.*—Then will come the body of the letter, which when type-

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written, will be written single-spaced, with a double space between paragraphs, which will be numbered consecutively.

3. *Signature.*—The body of the letter will be followed by the signature. If the rank and the regiment, corps, or department of the writer appear at the beginning of the letter, they will not appear after his name; but if they do not appear at the beginning of the letter, they will follow under his name.

4. *Omission of Ceremonial Forms.*—All ceremonial forms at the beginning and end of letters, such as "Sir," "I have the honor," "I would respectfully," "Very respectfully," etc., will be omitted.

5. *Use of Only One Side of Sheet.*—Only one side of the paper will be used, the writing beginning about 1 inch from the top.

6. *Office Marks.*—The stamps bearing office numbers will be placed on the back of the lower fold of the first sheet. The received and received-back stamps will be placed immediately below the body of the letter, and, in the case of indorsements, immediately after the proper indorsement. When a communication of two or more sheets is filed, the back of the lower fold of the first sheet will be on the outside, thus exposing to view the office numbers.

7. *Brief.*—The matter described in Par. 1 will constitute the brief of the letter.

8. *Folding.*—Letter paper will be folded in three and foolscap in four equal folds, parallel with the writing; the top fold will be folded toward the back of the letter and the lower fold over the face of the letter. In three-fold letters both the brief and the office mark will be on the outside. In three-fold letters of more than one sheet the two lower folds of the sheets other than the first will be placed between the first and second folds of the first sheet, thus exposing to view both the brief and the office mark. In four-fold letters, whether of one or more sheets, the brief will be exposed to view by covering the office-mark fold or the office mark may be exposed to view by covering the brief, according as it is desired to keep either the one or the other exposed to view for the purpose in hand.

9. *Inclosures.*—All inclosures will be numbered and will be given the proper office marks. Inclosures to the original communication will be noted on the face of the letter to the left of the signature. If others are added when an indorsement is made, their number will be noted at the foot of the indorsement to which they pertain and also on the back of the lower fold of the first sheet of the original communication. To the latter notation will be added the number of the indorsement to which they belong, thus "One inclosure—fifth indorsement." Inclosures to indorsements are numbered in the same series as those to the original paper and the number of the indorsement to which they belong is added below. If few in number and not bulky, inclosures may be kept inside the original paper; otherwise they will be folded together in a wrapper marked "Inclosures." Officers through whose hands official papers pass will make the inclosures secure

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when they are not so. The entry of serial numbers on inclosures and of notations on papers to show the presence of inclosures to an original communication or to show inclosures added to or withdrawn from a case when indorsements are written, will be made in the office in which the inclosures concerned originate or are added or withdrawn. The total number of inclosures accompanying a paper will be noted at the foot of each indorsement thereon.

Indorsements.—1. *Form.*—The writing width of indorsements will be the same as that of letters. The first indorsement will begin about ½ inch below the rank after the signature of the writer of the letter, and succeeding indorsements will follow one another serially, with a space of about ½ inch between indorsements.

The serial number of the indorsement, the place, the date, and to whom written, will be written as shown in the example.

When typewritten, indorsements will be written single-spaced with a double space between paragraphs. The paragraphs will be numbered consecutively.

2. *Additional Sheets.*—Should one or more additional sheets be necessary for indorsements, sheets of the same size as the letter will be used.

3. *"Respectfully Referred," etc., To Be Omitted.*—In referring, transmitting, forwarding, and returning papers, the expressions "Respectfully referred," "Respectfully transmitted," "Respectfully forwarded," and "Respectfully returned," will be omitted.

Letters and Indorsements.—1. The pages, beginning with the first, will be numbered midway about one-half inch from the bottom. In referring to an indorsement by number, the number of the page will also be given. Thus: "5th Ind., page 3."

Carbon Copies.—2. All letters and indorsements that are typewritten, excepting letters of transmittal, reports of taking leave of absence, periodical reports, and other communications of a similar nature, will be made with two carbon copies. One copy will be retained for the records of the office in which the letter was written, and the other will be forwarded with the communication for the files of the first office in which a complete copy of the communication is required for the records, but such forwarded copy will not be regarded as an inclosure within the meaning of Par. 9. The carbon copy retained for the office record will be initialed by the person responsible for the letter, and such person is charged with the duty of seeing that the name of the official who signs the letter and any changes made before signature are inserted in the carbon. When a complete copy of a communication is not required for the records of an intermediate office the carbon copy will be forwarded to the next office. The provisions of this paragraph apply only to communications addressed to individuals and offices within the military service.

The following example is given in order to serve as a guide in carrying out the foregoing instructions:

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20. Fort Riley, Kansas,
Oct. 29, 1910.

From: The Ordnance Officer.

To: The Commanding Officer, 7th. Cav.

Subject: New system of issuing ordnance stores.

1. In compliance with instructions contained in a letter from the Adjutant General's Office, dated Nov. 27, 1909, regarding the testing of a new system of issuing ordnance stores, the following report concerning the working of this system is submitted.

2. As far as I have been able to observe, the new system has no disadvantages. Its advantages are increased promptitude and accuracy.

A _____ B _____
1st. Lt., 7th Cav.

1st Ind.

Hq. 7th Cav., Ft. Riley, Kansas, Oct. 29, 1910.—To the C.O., Ft. Riley, Kansas.
I concur in the conclusions of the Ordnance Officer.

C _____ D _____
Major, 7th Cav., Comdg.

2d Ind.

Hq., Ft. Riley, Kansas, Nov. 1, 1910.—To Comdg. Gen., Dept. of the Mo. Approved.

E _____ F _____
Brig. Gen., Comdg.

Channels of Communication.—All classes of official communications will be addressed to the officer concerned, except that those intended for the Secretary of War will be addressed to The Adjutant General of the Army. Par. 782, A.R.

Communications, verbal as well as written, whether from a subordinate to a superior, or *vice versa*, will pass through intermediate commanders. This rule will not be interpreted as including matters in relation of which intermediate commanders can have no knowledge, and over which they are not expected to exercise control. For example, correspondence regarding the sick and wounded report need not be sent through the regimental commander as he has no knowledge of it and can exercise no control over it. Par. 783, A.R.

If in doubt as to the proper course, however, it is a safe rule to send the communication through military channels.

PAY

Troops are paid monthly by the Quartermaster Department, unless circumstances prevent, or as soon after the close of each month as practicable. G.O. 40, W.D., 1916, gives detailed instructions concerning preparations of payrolls. It is quoted at the end of the book. See also Par. 1315, A.R.

See Appendix II—37a.

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The detachment commander makes out payrolls (Forms 366 and 366*a*, W.D.) in triplicate, and enters thereon all facts that affect the soldier's pay, such as fines imposed by courts-martial, charges for property loss, absence without leave, etc. The men sign the original copy of the roll, and this and the duplicates are then forwarded to the Regimental Commander who sends two copies to the paying quartermaster, and returns one to the surgeon, to be retained. The quartermaster computes the amount due each man and enters it on the original, which is sent to the detachment commander before payment is made, so that the amount may be copied on the retained roll.

A commissioned medical officer witnesses the payment by the quartermaster, and signs all three copies of the roll, as evidence that he did so, and enters thereon the name of the quartermaster and date of payment.

Allotments.—Every enlisted man is permitted to allot such portion of his pay as he may desire for the support of his family or relatives, or for his own savings. To make an allotment, the detachment commander prepares the prescribed form (38, Q.M.C.) in duplicate, and when properly signed, one copy is forwarded to the Quartermaster General by registered mail, and the other retained. An allotment is made for a stipulated sum each month and for a definite number of months. The date, period and amount of allotment should be entered on each payroll during the period of the allotment, and also as a part of the soldier's record. Par. 1347, A.R.

Waiver of Certain Restrictions upon Allotment Privileges of Soldiers (Bulletin No. 41, July 12, 1917).

I. The provisions of Par. 1347, Army Regulations, which restrict allotment privileges to soldiers serving within the boundaries of the United States to the support of their families and relatives are waived in the cases of enlisted men who desire to make allotments of pay in favor of banking institutions for the purpose of purchasing liberty loan bonds. This waiver is made with the specific understanding that the men will not request discontinuance of the allotment prior to the date when they expire by limitation. The allotments will contain the notation "Purchase of liberty loan bonds." (2615017, A.G.O.)

Allotments of Pay for Support of Dependent Families of Enlisted Men (Bulletin No. 48, August 22, 1917).

II. Commanding officers of all organizations of the Army will make every proper effort to ascertain those enlisted men of their commands who have dependent families or relatives, and to encourage such men to make allotments of pay for the support of their dependents under the provisions of Par. 1347, Army Regulations. (292.2, A.G.O.)

Telegram, War Dept., Nov. 12, 1917, regarding allotments reads as follows:

For all enlisted men having a wife or child or divorced wife entitled to alimony, monthly compulsory allotment, equal in amount to the family allowance but not exceeding one-half pay or less than $15.00, begins

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November 1 for men in service that date and from enlistment for others. Organization commanders will enter on payrolls for November and each month thereafter amount of compulsory allotment required to be withheld with foregoing limitations as shown on Bureau of War Risk Insurance form 1 or 1(*a*). There will also be entered each month full amount of voluntary allotments to members of family of Class B under the act as shown on form mentioned, beginning with month in which it is signed. Compulsory allotment and voluntary allotments payable to members of Class B will be entered on payrolls in one sum as "War risk allotments dollars . . . ." Quartermaster forms thirty-eight will not be used for these allotments. If any such forms have already been sent in for war risk allotment, records should be cancelled and notice of cancellation immediately sent to Quartermaster General giving amount and names of alloters and allotees. At stations where War Risk forms 1 or 1(*a*) are not received by November 30, deductions for war risk allotments will not be made on November rolls but men should be informed that all compulsory allotments will date back to November 1 or to date of enlistment after that date on receipt of forms. Instructions of October 30 reference War Risk Insurance have been changed. Full amount of premiums will be entered on payrolls and officers pay accounts for month in which application is made, but in cases where prorata amount has already been withheld for October, the difference should be added to full monthly premium to be withheld for November.

Should the soldier desire the allotment discontinued prior to the expiration of the period for which it was granted, the surgeon prepares and transmits to the Quartermaster General, on the prescribed blank (Form 39, Q.M.C.) the soldier's request for discontinuance. The discontinuance of an allotment is entered on the soldier's record and noted on the payrolls. Par. 1351, A.R.

Deposits.—An enlisted man may deposit his savings with the quartermaster in sums of not less than $5.00, the same to remain so deposited until final payment on the discharge or until furloughed to the reserve. Par. 1361, A.R.

Each depositor is furnished with a book, which is forwarded to the quartermaster together with a list of deposits to be made by members of the detachment with the payrolls. The name of the depositor, date, place and amount is entered in the book in the form of a certificate and signed by the quartermaster and detachment commander, and the book returned to the soldier at the pay table. Each deposit is entered on the soldier's service record, and also on his final statement on discharge or furlough to the reserve. An advice of soldier's deposits (Form 8*a*, Q.M.C.) is forwarded to the Quartermaster General after each payment at which deposits are made by members of the detachment.

In the event of the transfer, desertion, or death of a soldier having deposits, report is made at once to the Quartermaster General by letter, or in urgent cases by telegraph.

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MEDICAL DEPARTMENT PERSONNEL ATTACHED TO REGIMENTS

Tables of Organization, 1917, page 72

	Infantry regiment		Cavalry regiment		Field artillery			
					2-battalion regiment		3-battalion regiment	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
Major	1	1	1	1	1	1	1	1
Captain or lieutenant	3	3	3	3	2	2	3	3
Veterinarian	...	...	2	2	2	2	2	2
Total commissioned	4	4	6	6	5	5	6	6
Sergeant, first class	1	1	1	1	1	1	1	1
Sergeant	3	3	3	3	2	2	3	3
Private, first class and private	17	29	17	29	12	20	17	29
Total enlisted	21	33	21	33	15	23	21	33
Aggregate	25	37	27	39	20	28	27	39
Horses, riding[1]	13	13	28	40	21	29	28	40
Mules, pack	1	1	2	2	2	2	2	2
Pistols	...	...	2	2	2	2	2	2

[1] One extra mount for each major. In the infantry, all commissioned and noncommissioned officers and the commissioned officers' orderlies are mounted; in the cavalry and field artillery, all of the personnel are mounted.

Medical personnel attached to the organizations is authorized as follows by G.O. 108, War Dept., 1917.

TO THE ARMY ENGINEER TROOPS

	Commissioned			Enlisted				
	Majors	Captains or lieutenants	Total	Sergeants	Corporals	Privates, first class	Privates	Total
Gas and flame service	1	2	3	3	1	8	16	28
Mining service	1	2	3	3	1	8	16	28
Water supply service[1]	1	7	8	6	2	8	16	32
General construction service	1	1	2	2	1	4	8	15
Engineer supply service	1	1	2	2	1	4	8	15
Surveying and printing service	...	2	2	1	1	3	6	11
Road service	2	3	5	6	3	12	24	45
Army pontoon park	...	1	1	1	...	1	2	4
Total	7	19	26	24	10	48	96	178

[1] Includes 6 sanitary detachments for water analysis, each of one sanitary officer (chemist), 1 sergeant and 1 private, first class and 1 private.

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TO THE ENGINEER TROOPS ON LINE OF COMMUNICATIONS

	Commissioned				Enlisted				
	Lieutenant colonels	Majors	Captains or lieutenants	Total	Sergeants	Corporals	Privates, first class	Privates	Total
General construction service	...	1	1	2	2	1	4	8	15
Engineer supply service	...	1	1	2	2	1	4	8	15
Forestry service	1	3	6	10	12	6	24	48	90
Quarry service	...	1	1	2	2	1	4	8	15
Light railway service	1	3	5	9	10	5	20	40	75
Standard gauge railway service	3	7	17	27	12	5	40	80	137
Total	5	16	31	53	40	19	96	192	347
For 46 service battalions	...	...	92	92	92	46	184	368	690
Aggregate medical personnel	5	23	142	170	156	75	328	656	1275

ASSIGNMENT OF PERSONNEL

No hard and fast rule, governing the assignment of the commissioned and enlisted personnel of a regimental sanitary detachment to their duties is considered either advisable or practicable. Not only will the personnel vary in number, but the conditions of service, which are seldom twice the same, will necessitate frequent changes in assignments.

The suggestions made below are based on the assumption that the full quotum of commissioned and noncommissioned officers is present with the organization. A diminution of this quotum will demand a change in the apportionment of duties.

Commissioned Officers.—The work to be done by the commissioned assistants should be clearly delineated. If such a division is made, changes in assignments should be frequent, in order that each junior may become familiar with all of the work demanded of a regimental officer.

All junior officers may be present at all drill and instruction periods, or they may be charged with this duty successively. At drill, unless the detachment is well instructed, junior officers should always be present to assist.

In some regiments all officers are present at, and take some part in the daily "sick call." In others they rotate in discharge of this duty.

Each officer should have assigned to him a certain area of the camp, *e.g.*, that part occupied by a battalion, to inspect daily, or a medical officer may inspect the camp, while another gives instruction, another takes sick call, etc., in monthly rotation. A report of inspection and the irregularities found should be made to the surgeon.

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As the surgeon is responsible for the instruction of his junior officers, it is advisable that each of them be required to supervise the preparation of some of the monthly reports and that these assignments be varied from month to month, so that each officer, in time, will have prepared all of the periodical reports.

One officer may be detailed in rotation daily as Medical Officer of the Day. It is his duty to remain in the camp during his tour of duty, to be available in case of emergency and maintain discipline. He should receive and treat incoming patients, except at sick call, duly enter their disposition in the company sick book and hour of treatment and sign the entry. He should inspect at least one meal during his tour of duty and make reports of emergencies when necessary.

Noncommissioned Officers.—Noncommissioned officers should be assigned to specific duties. In making such assignments their needs as well as experience should be considered.

Sergeant, First Class.—The sergeant, first class, should have general charge of all property, books, papers and records, reports and returns. In the care and keeping of these he is assisted by the other noncommissioned officers.

He receives communications and orders from regimental headquarters and brings them to the attention of the surgeon, and, after the necessary action is taken on them, sees that they are properly recorded and filed.

He should personally attend to all correspondence of a general nature, and prepare all reports, records and returns, pertaining to the personnel.

In so far as the enlisted personnel is concerned, he may be considered a "foreman," it being his duty to see that all enlisted members of the detachment obey orders and regulations and faithfully perform the duties assigned to them.

Sergeants.—One sergeant should be placed in charge of animals and transportation. He should have immediate charge of the forage and stable property, and be held responsible for the proper policing and sanitary condition of the stable, picket line, and grounds pertaining to them. He is also charged with the care of the animals, saddle equipment and harness, and the ambulances, if the command is provided with them.

A second sergeant should be placed in charge of property. He should have the care and custody of all property; should receive property invoiced to the organization; issue equipments to the men, and articles of property to other departments (*e.g.*, the stable or dispensary), in each instance securing the proper receipts therefor. He should keep the property records, prepare the required returns and attend to all correspondence pertaining to property.

The third sergeant should have charge of the dispensary and be held responsible for its police, venereal prophylaxis, etc. To him should be assigned the preparation and keeping of all sick and wounded records and correspondence relating to them. In case the detachment is not attached to another organization for rations, he should also have charge of the mess.

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Noncommissioned Officers in Charge of Quarters.—Each day one of the noncommissioned officers should be detailed in rotation "in charge of quarters." It would be his duty to see that all men are present at their duties, attend the required formations and are properly uniformed and equipped for the same; that the quarters of the men are properly policed and that all men are in quarters and lights out at the proper hour.

After the regular dispensary men have gone off duty for the day, he should be in charge of the dispensary, and, assisted by the Emergency Squad, should attend to such emergency cases as arise, summoning the Medical Officer of the Day, if necessary.

Privates, First Class, and Privates.—The following is but a suggestion for the assignment of privates first class and privates. It is applicable only under certain conditions. A rigid rule is not advisable. Men should be so assigned that all the work required is accomplished as efficiently and expeditiously as possible.

A. Regular Assignments

Detail	No. of men	Duties
Ambulance drivers.... / Ambulance orderlies...	1 for each ambulance	Care of the ambulances, the harness, and the ambulance animals.
Clerk.....	1	Assist in the keeping of records, preparation of reports and returns, etc.
Dispensary attendants...	2	Police of the dispensary, dispensing of medicines and application of dressings, under the immediate direction of the sergeant in charge.
Orderlies, officers.....	1 for each commissioned officer.	Care of the officers' and their own mounts and saddles.
Property.....	1	To assist the sergeant in charge of the property.
Stables.....	3	Care of noncommissioned officers' mounts and the pack mule; police of the stable and picket line.
Cook.....	1	To cook for the detachment if a separate mess is conducted. In the field the hospital detachment is usually rationed with the nearest company.

B. Daily Assignments

Emergency squad.....	2	To remain at the infirmary during their tour of duty; answer emergency calls; and assist in the work in the dispensary after the regular attendants have gone off duty for the day.
Messenger.....	1	To run errands, etc.
Outside police.....	2	To police ground around the detachment camp, the infirmary, etc.

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PROMOTION, ENLISTED MEN

Master hospital sergeants, hospital sergeants, sergeants first class, and sergeants are appointed by the Surgeon General only after an examination. Application for appointment to the higher grades should be forwarded to the Surgeon General through the Department Surgeon; if for appointment as a sergeant, to the Department Surgeon. Master hospital sergeants and hospital sergeants are not assigned to duty with regiments. Par. 34, M.M.D.

Cooks, not to exceed 6 per cent. of the detachment are appointed by the surgeon, when authorized by the Surgeon General. Corporals, lance corporals and privates, first class, are appointed on the recommendation of the regimental surgeon, by the Surgeon General, Department Surgeon, or the Division Surgeon of a mobilized division. Par. 37, M.M.D.; Par. 1405, A.R. Privates first class are authorized in the proportion of five privates first class, to each private.

RIBBONS

Ribbons, Wearing of, For Wounds (General Orders, No. 134, War Dept. Oct. 12, 1917).

XI. 1. Every officer and enlisted man who has been wounded in action since April 6, 1917, or who may hereafter be so wounded, is authorized to wear ribbons for such wounds under the following conditions:

(*a*) That one ribbon only is authorized for wound or wounds received on the same date.

(*b*) That for each date upon which wounds are received, a separate ribbon is authorized.

Superseded.

2. Commanding Officers will forward to the Adjutant General of the Army, through military channels, lists in duplicate of those officers and enlisted men of their commands who have been honorably wounded in action, with a statement in the case of each individual, showing time and place wounds were received and organization in which they were then serving. Whenever a report is made of an action it will be accompained by the above described list.

3. The right to wear the ribbon will be confined to those who are authorized to do so by letter from the Adjutant General of the Army.

4. The ribbon will be described in Par. 160½ Special Regulations No. 42, and will be furnished as directed in subparagraph 6 of Par. 66, Compilation of General Orders, Circulars, and Bulletins, War Department, 1881–1915.

5. The ribbon will be worn on the right breast.

SUBSISTENCE

Owing to the small size of the detachment with a regiment, it is not practicable to conduct a separate mess for it, unless the regiment is operating independently, in which case, a Regimental Hospital will be es-

See Appendix II—44a.

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tablished. In this event, it devolves upon the surgeon to conduct a mess for the sick in hospital, and, consequently, he can at the same time, subsist the detachment. However, it will be the rare exception when the regiment will operate independently, and, therefore, the surgeon should request the regimental commander to apportion the enlisted men of the Medical Department, among the various organizations, for subsistence.

The medical officers on duty with a regiment serving independently may be members of a mess conducted for all, or for a part of the officers. Sometimes they subsist with the troops paying to the detachment cook a stipend for the extra work and to the mess sergeant a sum sufficient to reimburse him for the value of their food. Unlike the enlisted men they must pay for their subsistence. Their food is served as a rule after the detachment has had its meal. Usually the officers supplement the ration by articles purchased for them by the mess sergeant or by themselves. The average cost of subsistence when officers are thus living with troops and when it is thus supplemented is about fifty cents a day. Any subsistence of officers at the expense of the detachment must studiously be avoided.

Should a mess be maintained for the detachment ration returns for the enlisted personnel must be accomplished by the surgeon and sent to the regimental commander. After approval by the latter, the rations are issued by the supply officer. A ration return is made out, as a rule, for each month. Pars. 1202 to 1222, A.R.

Colonel W. F. Hare writes of service in France:

The men should have from 2 to 5 days canned rations with the detachment at all times, even if carried in spare barrack bags. Coffee should be taken over in quantity. Pistols, etc., should be boxed until destination is reached. There should be extra hats to replace those blown overboard, and basins for 10 per cent. of the command. Each man should be well supplied with gloves, handkerchiefs, tobacco, face and toilet soap, sweaters, mitts, woolen helmets, American stamps, good fountain pens, chocolate, concentrated soups, or small cans of soups. Equipment should be marked on all surfaces. Fleeced-lined leather gloves are desirable. If men cannot equip themselves these articles should be purchased from the Hospital Fund.

Rations are not drawn for the sick subsisted in a Regimental Hospital, but in lieu thereof commutation at the rate of forty cents per ration will be paid to the surgeon by the designated quartermaster.

TRANSFERS

When a member of the medical department is transferred from one station or command (except as noted in (*a*) of this paragraph) no articles of public property, other than the necessary clothing will be transferred with him, unless ordered by the authority directing the soldier's transfer. Par. 48, M.M.D.

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(*a*) In the case of enlisted men of the Medical Department ordered on field service, the equipment to be taken is usually prescribed in the order directing the movement. When not so prescribed the equipment transferred with the soldier will be that specified in Par. 865*a*, M.M.D. Invoices for the property so transferred will be prepared as outlined under the subject of property.

When such a transfer occurs, there will be transferred with the service record, a statement showing the sizes of clothing worn by the man, as kept on file at his old station, and if transfer occurs in time of peace an efficiency report of soldier (Form 80, M.D.) will be attached to service record and a duplicate of the report will be retained. Pars. 46 and 47, M.M.D.

Should a soldier who has made an allotment or a deposit be transferred or desert, report of same by letter should be made to the Quartermaster General of the Army. Pars. 1356 and 1361, A.R.

REPORTS AND RETURNS PERTAINING TO THE REGIMENTAL SANITARY DETACHMENT

Hypothetical copies of reports and returns, illustrating how each is made out, are found in the back of this book.

Table A is a list of all the principal records, required to be kept in connection with the detachment, in addition to the retained copies of the reports, returns, etc., listed in Table B.

A. RECORDS

Title of record	Form No.	Regulation governing	Remarks
Correspondence book	Furnished by Adjutant General's Department	Par. 280, A.R.	An indexed book, in which is to be entered a brief of each item of correspondence in respect to which a record is necessary, and a notation of the action taken thereon. See instructions on inside of cover.
Document file.....	.....	Par. 280, A.R.	Contains all original documents or communications when these are retained, and copies of all letters, indorsements and telegrams sent in connection with the same. Also copies of all communications originating in the office. Papers to be numbered and filed in accordance with their serial numbers.
Duty roster.....	Furnished by Adjutant General's Department.	Par. 282., A.R.	Records of all details for service.
Hospital Fund.....	49, M.D.	Par. 327, A.R.	Consists of duplicate copies of all Hospital Fund Statements. Practically a "loose leaf" account book.

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A. RECORDS (*Continued*)

Title of record	Form No.	Regulation governing	Remarks
Morning report of Detachment Medical Department	332, A.G.O.	Par. 280, A.R.	Shows exact status of every member of detachment. Changes that have occurred since preceding day are noted therein, sent to the Adjutant each morning and returned to the Surgeon after it has served its purpose at headquarters.
Order files.....	.....	Pars. 791 to 806, A.R.	A file of all orders, bulletins, and circulars received and orders issued. One for each office from which issued.
Prescription file.....	.....	Par. 240, M.M.D.	Consists of three separate files, as follows: (1) Prescriptions for alcohol or alcoholic liquors, and for medicines containing opium or any of its derivatives, salts or preparations of opium or cocoa leaves; (2) prescriptions for civilians which do not include articles of the preceding class; and (3) all other prescriptions.
Record of individual property responsibility	.....	Par. 280, A.R.	An account of all ordnance, quartermaster and medical property in the possession of members of the detachment.
Record of instruction, Detachment Medical Department	.....	Pars. 163 and 178, M.M.D.	A record of class work for each enlisted man, in each subject of the instruction course.
Record of punishments	.....	Par. 280, A.R.; Par. 334, M.C.M.	An account of all disciplinary punishments awarded by the surgeon. See "Discipline."
Record of sizes of clothing	.....	Par. 37, U.R.	See under "Clothing."
Service records.....	.....	Par. 280, A.R.	A complete record, description, and accounts of each man who belongs or who has belonged to the detachment. A record of vaccinations and typhoid prophylaxis will also be kept on these blanks.
Sick report, Detachment Medical Department	339, A.G.O.	Par. 280, A.R.	In this are entered the names of all members of the detachment requiring medical attention and the disposition of their cases, *i.e.*, whether returned to duty, admitted to hospital or quarters, etc. Made out daily for those on sick report.

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B. Reports and Returns

Name of report	Form	No. of copies	To whom sent	Remarks
Daily				
Field report of sanitary personnel and transportation	82, M.D.	2	1 to proper medical superior, 1 retained	Par. 558a., M.-M.D.
Sick report of detachment		1		See above
Monthly				
Payrolls, enlisted men.....	366 and 366*a*, W.D.	3	3 to regimental commander who returns 1 for record	
Return of Detachment Medical Department	47*a*, M.D.	2	1 to S.G. through D.S.	For field use only.
Statement of Hospital Fund	49, M.D.	2	1 to S.G. through D.S., 1 retained	Pars. 260 to 262, M.M.D.
Bimonthly				
Muster roll Detachment Medical Department	61, A.G.O.	2	2 to mustering officer	1 returned to surgeon. Original forwarded direct to the Adjutant-General of the Army by mustering officer.
Return of Detachment Medical Department.	47, M.D.	2	1 to S.G. through D.S.	For use in garrison, and when ordered in the field.
Yearly				
Efficiency report of medical officers	429, A.G.O	1	To Adjutant General through channels	See Par. 829, A.R. Discontinued during the war.
Occasionally				
Allotment of pay.....	38, Q.M.C.	2	1 to Q.M.G., 1 retained	
Advice of soldier's deposits..	8*a*, Q.M.C.	1	To Q.M.G.	
Certificate of Identity.....	61, M.M.D.	1	To those entitled to wear a brassard	
Designation of beneficiary...	38,0 A.G.O.	1	To A.G. direct	Notation made on soldier's service record.
Discharge certificate, enlisted man	525 to 527, A.G.O.	1	To soldier	
Discontinuance of allotment of pay	39, Q.M.C.	1	To Q.M.G.	Notation made on retained copy of allotment and service record.
Efficiency report of officers...	429, A.G.O.	1	To officer's new commanding officer, or surgeon of new station	On change of station. Discontinued during present emergency.

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B. REPORTS AND RETURNS (*Continued*)

Name of report	Form	No. of copies	To whom sent	Remarks
Occassionally Continued				
Efficiency report of enlisted man	80, M.D.	2	1 to accompany service record, 1 retained	See Par. 46, M.-M.D.
Final statement, enlisted man.	370, W.D.	2	As prescribed on form	
Furlough.....	66, A.G.O.	1	To soldier	
Inventory of effects, deceased officer, or enlisted man	34, A.G.O.	3	2 to A.G., 1 retained	See "Deaths."
Notification of discharge, enlisted man	3, A.G.O.	1	To paying Q.M.	
Ration return, Detachment Medical Department	223, Q.M.C.	2	1 to regimental commander, 1 retained	At such intervals as prescribed by the regimental commander. Only when mess is maintained.
Report of change of station, or status, enlisted man	Letter	3	2 to S.G. through D.S., 1 retained	See Par. 45, M.-M.D.
Report of soldier's deposits..	Letter	1	To regimental commander with payrolls	
Report of transfer, desertion, or death of soldier having deposits or allotment.	Letter or telegram, 213, Q.M.C.	1	To Q.M.G.	
Requisition for clothing, individual	165, Q.M.C.	2	2 to regimental supply officer	See "Clothing."
Requisition for clothing in bulk	213 Q.M.C.	3	3 to regimental supply officer	do
Statement of clothing.....	165*b*, Q.M.C.	1	Retained	do

Disposition of Old Records.—When a detachment is broken up the surgeon completes all reports and returns and forwards them to the Surgeon General. Par. 425, M.M.D.

After five years from their date all papers, except those mentioned below, may be destroyed. Those which are to be permanently preserved are the correspondence book, the document file, the records of enlisted men as kept in the service records and deposit books, the muster rolls, the monthly returns, and all other returns of personnel, and the general orders and circulars of the War Department. Par. 281, A.R.

When, in the theatre of operations, retained records accumulate to such an extent as to be burdensome, they will be classified, wrapped, labelled, and forwarded, for safe keeping, to the surgeon, base group, or to such other officer as the Division Surgeon may direct.

REGIMENTAL SANITARY EQUIPMENT

The equipment of the regimental sanitary organization, in addition to the individual equipments of the medical officers and enlisted men hereto-

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REGIMENTAL COMBAT EQUIPMENT

Pars. 866, 867, M.M.D.

Article	A	B	C	Source	Remarks
Ax, short handle	1		1	M.D.	
Bag, nose	1		1	Q.M.D.	
Bag, water, sterilizing	1		1	Q.M.D.	
Box, pack mule, empty (Par. 909)	1		1	M.D.	
Brush, horse	1		1	Q.M.D.	
Bucket, galvanized iron	1		1	M.D.	
Candles, lantern	8		8	M.D.	
Chest medical, and surgical (par 932)	1		1	M.D.	
Comb, curry	1		1	Q.M.D	
Desk, field, No. 2, with contents	1		1	M.D.	Carried on regimental field train.
Guidons, ambulance, without staff	2		2	Q.M.D.	
Lanterns, folding	2		2	M.D.	
Litters, with slings:					
Battalion of Engineers	2		2	M.D.	One additional litter in possession of each company, troop and battery. When on the march and not in presence of the enemy, all litters are carried on the combat train.
Battalion of Signal Corps	1		1	M.D.	
Regiment of Artillery	7		7	M.D.	
Regiment of Cavalry	6		6	M.D.	
Regiment of Infantry	9		9	M.D.	
Saddle, pack	1		1	M.D.	
Surgical dressing boxes	1		1	M.D.	Contents only. Carried in box, pack mule.
Surgical dressings, ambulance boxes of:					
Regiment of Artillery	2		2	M.D.	Carried on the ammunition wagon.
Regiment of Cavalry	3		3	M.D.	
Regiment of Infantry	9		9	M.D.	
Tentage, heavy:					
Fly, wall tent, small, with, ropes	1		1	Q.M.D.	
Tent pins, small	6		6	Q.M.D.	
Wire cutters	1		1	M.D.	
Additional Articles					
Cover, mule, blanket-lined	1		1	Q.M.D.	For winter use only.
Equipments, horse	*		*	O.D.	*See tables of organization.
Equipments, individual, officers	*		*	M.D.	*See officers equipments. Par. 864, M.M.D.
Equipments, individual, enlisted men	*		*		See Par. 865, M.M.D.
Halter and strap	1		1	Q.M.D.	For pack mule.
Horses riding, for officers	*		*	Q.M.D.	*1 for each Captain, and Lieutenant not privately mounted.
Horses, riding, for enlisted men	*		*	Q.M.D.	See tables of organization.
Lime, hypochlorite, tubes	10		*	Q.M.D.	Replenished by Q.M.
Mule, pack	1		1	Q.M.D.	
Shoes, horse, fitted	*		*	Q.M.D.	*1 fore and 1 hind for each mount.
Shoes, mule, fitted	2		2	Q.M.D.	1 fore and 1 hind in pack.
Nails, horseshoe	*		*	Q.M.D.	*16 for each animal.

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CAMP INFIRMARY EQUIPMENT

Pars. 869 and 870, M.M.D.

Article	A	B	C	Source	Remarks
Medicines and Antiseptics					
Foot powder, boxes	100		100	M.D.	Other medicines and antiseptics contained in chests, emergency case and veneral prophylaxis unit.
Iodine swabs, 6 in box, boxes	100		100	M.D.	
Spiritus ammoniæ aromaticus, ½ lb. in glass-stopper bottles	6		6	M.D.	
Miscellaneous					
Alcohol, denatured, 2 quarts in tin, tins	2		2	M.D.	
Bag, water, sterilizing	1		1	Q.M.D.	
Basins, hand	3		3	M.D.	
Buckets, galvanized iron	4		4	M.D.	1 Quartermaster bucket on wagon.
Candles, pound	2		2	M.D.	
Case, emergency	1		1	M.D.	
Chest, medical and surgical	1		1	M.D.	
Chest, medical and surgical, supplementary	1		1	M.D.	
Corks, No. 2, 150 in bag, bags	1		1	M.D.	
Desk, field No. 2	1		1	M.D.	
Flag, distinguishing, red cross	1		1	Q.M.D.	
Flag, halyards for 50 feet	2		2	Q.M.D.	
Flag, national, storm	1		1	Q.M.D.	
Flag, staff for, complete	1		1	M.D.	
Food, box of	1		1	M.D.	For emergency use only.
Guidon, ambulance, with staff	1		1	Q.M.D.	
Lanterns, without globes or wicks	2		2	M.D.	
Lanterns, globes for, green	2		2	MD.	
Lanterns, globes for, white	4		4	M.D.	
Lantern, wicks for, dozen	1		1	M.D.	
Litters with slings	2		2	M.D.	
Rope, ⅜-inch, feet	100		100	M.D.	
Soap, ivory, cakes	10		10	M.D.	
Spade	1		1	Q.M.D.	
Stove, alcohol	1		1	M.D.	
Surgical, dressings, boxes	2		2	M.D.	
Tent, wall, complete	1		1	Q.M.D.	
Towels, hand, dozen	2		2	M.D.	
Twine, coarse, pounds	1		1	M.D.	
Venereal prophylaxis unit	1		1	M.D.	
Vials, 1-ounce, dozen	6		6	M.D.	
Additional Articles					
Covers, mule, blanket, lined	4		4	Q.M.D.	For winter use only.
Equipments, individual, Medical Department	2		2		See enlisted men's equipments.

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CAMP INFIRMARY EQUIPMENT (*Continued*)

Pars. 869 and 870, M.M.D.

Article	A	B	C	Source	Remarks
Lime, hypoclorite, tubes	20		20	Q.M.D.	Replenished by camp quartermaster.
Mules, draft	4		4	Q.M.D.	
Oil, mineral, quarts	5		5	Q.M.D.	
Shoes, mule fitted	16		16	Q.M.D.	
Nails, horseshoe	128		128	Q.M.D.	
Wagon, escort, and harness, complete	1		1	Q.M.D.	For equipment of wagon see Note, 33, Table of Fundamental Allowance, 2 M. Supplies.

NOTE.—There is given in Par. 871, M.M.D. a list of equipment, called the Camp Infirmary Reserve. It is only supplied under certain exceptional conditions outlined in the paragraph referred to, and for that reason is not quoted here.

fore enumerated, consists of three distinct groups of articles, viz., the *Regimental Combat Equipment*, the *Camp Infirmary* and the *Regimental Hospital.*

As previously noted, all equipments are divided into three designations, A, B, and C. Equipment A is the equipment prescribed for use in campaign, in simulated campaign or on the march. Equipment B is the equipment, which in addition to equipment A is prescribed for the use of troops in mobilization, concentration, instruction or maneuver camps. Equipment C is the sum of Equipments A and B and therefore includes every article of equipment prescribed for field service. Par. 860, M.M.D.

For convenience in reference, the tables of the Regimental Combat Equipment and Camp Infirmary Equipment are given here. The Regimental Hospital Equipment is omitted as it will be the rare exception when the regiment is provided with it; it being furnished only when the regiment is acting independently, under which circumstances the sanitary personnel will be required to provide hospital care for the organization's own sick and wounded.

How Obtained.—Reference to the tables of equipments will show that the articles of equipment come from three different sources—The Medical, the Ordnance, and the Quartermaster's Departments. Each class of property is obtained and accounted for to respective bureau.

Medical Property.—In time of peace, or in the interior in time of war, medical supplies are obtained by monthly requisitions (Form No. 35, M.D.) submitted in quadruplicate to the Department Surgeon through the Division Surgeon, or direct to the Department Surgeon, if the regiment is not a part of a mobilized division. The regulations governing the preparation of requisitions, which should be rigidly followed, will be found in paragraphs referred to. Pars. 477 to 486, M.M.D.

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In the theatre of operations in time of war, medical supplies are obtained by requisition made on the same form and submitted in duplicate to the Division Surgeon. In combat expenditures of surgical dressings and similar articles may be replenished from the reserve supplies of the nearest ambulance company or camp infirmary without formal requisition, invoices or receipts. In emergencies, the Division Surgeon may authorize the transfer of supplies between other sanitary formations. Par. 551 and 552, M.M.D.

Ordnance and Quartermaster Property.—Articles of ordnance and quartermaster property are obtained by requisition, in the form of a letter, addressed to the Regimental Supply Officer through the Commanding Officer.

How Accounted For.—When property is intrusted to any person, and the latter is required to make returns therefor, that person is both *accountable* and *responsible*. A person to whom property is intrusted, but who does not have to make return therefor, is responsible but not accountable. An accountable officer is relieved from responsibility for property for which he holds a proper memorandum receipt. A responsible officer is not relieved from responsibility for public property until he has returned the property to the accountable officer or has secured a receipt therefor from his successor, or until he has otherwise been relieved by operation of regulations or orders. Par. 657, A.R.

The surgeon is responsible for all public property pertaining to his detachment. This responsibility cannot be transferred to enlisted men. Pars. 661 and 663, A.R.

Before signing receipts for property, the surgeon should personally make or delegate one of his commissioned assistants to make a careful check to see if the invoices are correct. This applies particularly to the contents of cases of instruments, etc., the same not being enumerated in detail on the invoices. Par. 498, M.M.D.

Property is of two classes—"expendable" and "non-expendable." The former can be dropped upon the proper vouchers, but no article of non-expendable property can be dropped without authority in the form of an approved report of a surveying officer, an approved report of an Inspector General, invoices showing the transfer of property to another officer, a certificate of the responsible officer in certain circumstances, or a statement of charges on the payrolls against enlisted men.

Medical Property.—When the property requisitioned for is sent from a Supply Depot, the Medical Supply Officer sends duplicate copies of invoices, one to the Surgeon General the other to the Surgeon, who retains it as a voucher to his return, and signs two as receipts, sending one to the Supply Officer and sending the other to the Surgeon General. Par. 496, M.M.D.

Every article of medical property which comes into the possession of a medical officer is to be taken upon that officer's return of medical property (Forms 17*a* and 17*b*). All property expended or transferred should also be taken up in the proper columns of his return. On being relieved the

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medical officer will complete his return as outlined in Par. 507, M.M.D. Par. 501, M.M.D.

Ordnance Property.—The Regimental Supply Officer will issue ordnance property to the surgeon, who will receipt in duplicate for all articles, thus obtained, giving one copy of the receipt to the Supply Officer and retaining the other copy for his own files.

All articles of ordnance property are to be taken up on the current return of ordnance property in the debit column, and all articles transferred, lost or destroyed, noted in the credit column. The instructions on the blanks should be carefully followed. The return is to be submitted semi-annually or when relieved from accountability.

Quartermaster Property.—Quartermaster property is issued to the surgeon, who signs a memorandum receipt for it. In this instance the surgeon does not render returns, and so is not accountable, but responsible to the Supply Officer who renders the required return.

Unserviceable Property.—Property worn out by fair wear and tear in the service, which has no salable value, should be submitted to a surveying officer and disposed of as indicated in Par. 717, A.R. or it may be submitted to an inspector without prior action of a surveying officer. Par. 678, A.R.

Property worn out by fair wear and tear in the service which presumably has some saleable value will be submitted to an inspector without prior action of a surveying officer.

Property which has been rendered unserviceable from causes other than fair wear and tear in the service will be submitted to a surveying officer except as provided in Par. 1073, A.R. In the case of public property unless destroyed under the provisions of Par. 717, A.R. it will subsequently be submitted to an inspector.

Medical Property.—Damaged or unserviceable medicines, medical books, surgical or scientific instruments and appliances, pertaining to the Medical Department, will not be presented to an inspector for condemnation until authority for so doing has been obtained from the Department Surgeon, or, if with a mobilized division, from the Division Surgeon. Par. 1488, A.R.

Lost Property.—Property lost should be charged against the man or men responsible, or if the responsibility cannot be determined, the question should be submitted to a surveying officer. Par. 682, A.R.

Unless the property is charged against an enlisted man, or the responsible officer is relieved by a surveying officer, or unless the officer shows, by his own affidavit or certificate, that the damage, loss, or destruction was occasioned by unavoidable causes and without fault or neglect on his part, the money value of the property will be deducted from his pay. Par. 683, A.R.

The approved report of a surveying officer or an inspector, or the certificate or affidavit of the officer, or the statement of charges on the payrolls against enlisted men, becomes a voucher to the accountable officer's return in the case of both medical and ordnance property. In the case of

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quartermaster property, those reports, certificates or statements should be submitted to the Regimental Supply Officer, who will furnish the surgeon with a credit slip for the articles covered by them.

TRANSFERS, MEDICAL PROPERTY

In ordinary transfers of medical property the surgeon transferring it will at once forward invoices in duplicate (Forms 23, 24, 28, or 31), one to the Surgeon General direct and one to the receiving officer. The latter will promptly upon completion of the transfer forward receipts in duplicate, one to the Surgeon General direct, and the other to the transferring officer, who will take up the same as a voucher to his return. Par. 496, M.M.D.

Ordnance Property.—Articles of personal equipments, or other ordnance property which a detached soldier carries with him, will be entered on duplicate invoice and receipt transfer blanks (Forms 152, O.D.). The two transfer blanks will be signed by the accountable officer, and by the soldier acknowledging receipt of the stores. One of these signed blanks will be forwarded with the service record of the soldier; and the second constitutes the voucher under which the accountable officer will drop from his return the articles enumerated on the voucher. Par. 1535, A.R.

On the arrival of the soldier at his destination all articles appearing on the transfer blanks accompanying the service record will be taken up by the proper officer, who will receipt for the same on this blank and forward it immediately to the Chief of Ordnance. All articles missing on arrival will be charged on the pay rolls to the soldier.

Serviceable surplus ordnance equipment will be invoiced to the Supply Officer.

Quartermaster Property.—When a soldier carries articles of quartermaster property to a new station, his receipt should be taken for the same. This receipt is sent to the Regimental Supply Officer who furnishes a credit slip to the surgeon for the articles in question.

CARE OF PROPERTY

The surgeon will be held responsible for the serviceable condition of all property in his possession. He should personally make, or detail one of his commissioned assistants to make, frequent checks and inspections of property. Leather articles should be properly cleaned and oiled lest they become dry and crack. Metal instruments must be kept free from rust, and the edges of knives and cutting instruments kept sharpened, lest when an emergency necessitates their immediate use, they be found unserviceable.

A noncommissioned officer should be in direct charge of all property and should be held personally responsible for the safe keeping of it; he should, under the supervision of the surgeon, issue to enlisted men their individual equipment and take their receipts therefor. Receipts should also be required for property issued to the dispensary, to the noncommissioned officer

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in charge of the animals, and to ambulance drivers. The men into whose care property is entrusted are to be held strictly responsible for its safe keeping, and should be made to pay for all articles lost, damaged or destroyed, unless such loss, damage or destruction was unavoidable, and not due to carelessness nor neglect, and the man is exonerated from blame by a Surveying Officer.

The regulations for the care of medical property will be found in Pars. 512 to 526, M.M.D.

Distribution and Use of Equipment.—In time of peace the Regimental Surgeon is charged with the responsibility of keeping on hand the proper equipment. Should a regiment be divided between two stations, the Camp Infirmary may be assigned where the larger portion of the regiment is stationed and the Combat Equipment to the station of the other units. If a regiment is divided between three or more stations, the Camp Infirmary may be assigned to one station and the Combat Equipment to the other, while the units at each of the other stations may be supplied with an extra medical and surgical chest. Par. 504, M.M.D.

In the event of mobilization, regiments will take with them to the concentration camp the Combat Equipment and the Camp Infirmary unless otherwise specifically directed by the department commander. Par. 506, M.M.D.

In mobilization and concentration camps, the supplies and equipments of the regimental sanitary organizations will be maintained intact, being used only for purposes of demonstration and instruction. Under such circumstances, the Camp Surgeon will provide the necessary supplies for the treatment of the sick. Pars. 597 and 601, M.M.D.

When the division is assembled, the surgeon will turn into the officer in charge of medical property, all excess medical supplies and the Camp Infirmary Equipment. The sanitary equipment will now consist of the first-aid packet carried by each officer and enlisted man of the Army; the articles carried as individual equipments by medical officers and enlisted men of the Medical Department, and the Combat Equipment. Pars. 633 and 658, M.M.D.

When the regiment is operating independently, the Medical Department Equipment available for its use consists of the equipments mentioned in the preceding paragraph, plus the Camp Infirmary Equipment, and the additional articles necessary for the establishment of a regimental hospital. Par. 632, M.M.D.

Laundry.—The regimental sanitary organization will have little linen belonging to the Medical Department, to be laundered, except hand towels, unless the regiment is acting independently. Ordinarily the few towels used can be washed by enlisted men. Should it be desired to put the work out to private laundries, instructions in full governing this procedure are outlined in Pars. 270 to 278, M.M.D.

Sale of Medicines.—At isolated stations where issues of medicines to civilians become necessary to save life or prevent extreme suffering, medical

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officers will make such issues, and at the end of each month will report the circumstances to the Surgeon General. Unless the patient is destitute, charges will be made and the proceeds disposed of and accounted for as outlined in Pars. 242, 243, 244, M.M.D.

Transportation by Ambulances in Time of Peace, in the Theater of Operations.—In time of peace one or more ambulances and a wagon will be attached temporarily to each regiment of infantry, cavalry and artillery, for the purpose of transporting the sick and wounded, and the Camp Infirmary respectively.

When the regiment acts independently, the ambulances and wagon will accompany it. When a part of a division, it will have but one Combat Equipment to transport, and this will be carried on 3 mules or carts. While on the march, ambulances will be assigned from the division sanitary train to accompany the regiment, but at the close of the day's march, these ambulances habitually rejoin the train.

The ambulances should be inspected frequently to see that proper care of them is being taken. Wheels should be removed at regular intervals and the hubs and axles cleaned and regreased. This applies also to the fifth wheel. Curtains should be unrolled frequently and cleaned, especially if rain has fallen while they were rolled up. The tongue should be inspected for cracks, and an extra tongue should always be kept on hand for each ambulance. Water cans should be filled daily.

The sanitary service will always have a number of mounts and one pack mule to care for, and when ambulances are attached, there will be draft animals. The animals belonging to the wagon are cared for by the teamster who drives the same.

CARE OF ANIMALS.

Horses require gentle treatment, and must never be kicked, or struck about the head.

Daily exercise for at least two or three hours is necessary for the health and good condition of the horses. They should be marched a few miles when cold weather, muddy ground, etc., prevent drill.

Horses' legs should often be hand rubbed, particularly after severe exercise, as this removes enlargement and relieves or prevents stiffness.

The sheath should be washed out when necessary with warm water and castile soap, and then dried with a cloth.

Grooming.—Animals should be groomed at the picket lines twice daily, under the supervision of the first sergeant and a commissioned officer.

Each orderly habitually grooms his own horse and the officer's mount; the ambulance drivers and orderlies look after the ambulance animals, and one or two men detailed look after the pack mule and the noncommissioned officer's mounts.

Animals should be groomed for at least twenty minutes, and then inspected, being further groomed if necessary.

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To Groom.—Take the currycomb in the right hand, fingers over back of comb; begin at the near side at the upper part of the neck, thence proceed to the chest, arms, shoulders, back, belly, flank, loins, and croup in the order named. Then go to the off side, taking the comb in the left hand, and proceed as before.

The currycomb is applied gently and is only to loosen the scurf and matted hair; it is not used on the legs from the knees or hocks downward, except to loosen dried mud.

Next take the brush in the left hand and change the currycomb to the right; begin at the head and then on the neck at the rear side, and proceed in the same order as in currying; brushing also the parts not touched by the comb; on the off side, take the brush in the right hand, the currycomb in the left. The principal working of the brush should follow the direction of the hair, but in places difficult to clean, it may be necessary to brush against it, finishing by leaving the hair smooth. After every few strokes clean the brush from dust with the currycomb.

Having finished with the brush, rub or dust the horse with the grooming cloth, wipe the eyes, ears, and nostrils, and clean the hock. The skin under the flank and between the hind quarters must be soft, clean and free from dust.

Currycombs, cards, or common combs must never be applied to the mane or tail; the brush, fingers, and cloth are freely used on both.

The wisp is used when the horse comes in wet from exercise, rubbing against the hair until dry, from his hind quarters up to his head. If very wet, very hot, or very cold, blanket the horse, and groom and hand rub the legs, then remove the blanket and groom the body.

Shoeing.—At the morning grooming the feet should be carefully examined, and horses requiring shoeing should be reported to the stable sergeant.

Great attention should be paid to this detail. The blacksmith should fit the shoe to the foot, not the foot to the shoe. Have the animals shod as soon as they need it. The frequency of shoeing will be governed by the amount of work performed and the character of the roads. Ordinarily once in three or four weeks will be sufficient. Teamsters should report to the Quartermaster the condition of the shoes, and when camp is reached the blacksmith should attend to the animals at once. When it is necessary to have an animal shod on the march, turn the team out of the column, and instruct the teamster where and how to join the train.

Feeding.—The guiding principles in feeding are:

1. Feed in small quantities and often.
2. Do not work the animal hard after a full meal.

In garrison and on the march animals should be fed at reveille, at midday and at night, ordinarily one-third of the grain ration being given each time. In the evening, grain should be fed after hay has been distributed, the picket line policed, and the dust has settled.

Mules receive 9 pounds of oats, corn and barley and 14 pounds of hay

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daily. Horses receive 12 pounds of either of the former, and 14 of the latter. To each animal 3 pounds of bran may be used in lieu of that amount of grain. This should be used once or twice a week. Animals should be grazed when possible, especially when forage cannot be obtained. Animals should be grazed at every opportunity in the Spring. They receive a per capita daily allowance of 0.8 ounce of salt and 0.1 gill of vinegar, which should be given twice a week. When animals gnaw feed boxes or lick each other's coats, they need salt.

Good oats weigh about 40 pounds per bushel, barley about 48 pounds, corn about 56 pounds, and pressed hay 56 pounds per cubic foot.

Watering.—Animals must be watered quietly and without confusion. The manner in which this duty is performed is often a good test of the discipline of the organization.

Horses are to be led to and from water at a walk. At the drinking place no horse should be hurried or have his head jerked up from the water.

Horses should not be watered before feeding nor until two hours after feeding. The rule is to allow water in small quantities and often; in hot weather as often as practicable; in very cold weather once a day, about noon, is sufficient. Horses rarely drink freely in the early morning. Before starting a march, horses should be watered, especially if nothing is known as to the country over which the day's march is to be made. As many animals, however, will not drink at an early hour, or until after exercising, the animals should be watered at the first opportunity thereafter.

On the march the oftener the animals are watered, the better, especially as it is not usually known when water may be obtained again. Many watering places not otherwise available may be used by watering from buckets. In warm weather water drawn from a cold spring or well should stand long enough for the chill to pass off.

While it is true that on the march animals should be watered at every opportunity, it must never be forgotten that a warm animal should be watered but sparingly, and that such a watered animal should not be allowed to remain stationary even for a few minutes, as this induces laminitis (founder), due to contraction of the internal blood-vessels by the cold water taken and the consequent increase of blood-pressure in the legs and feet where it cannot, while the animal is inactive, be taken care of by the system. At rest a horse will usually drink 6 gallons of water daily and when at work from 8 to 12 gallons daily.

Draft Animals.—Draft animals at work, other than when attached to ambulances and light spring wagons should not be driven out of a walk. In general, constant and intelligent supervision of the bearing parts of harness, packs, and saddles is productive of better results than medication in keeping transportation animals in serviceable condition.

On arrival in camp let collars remain in position for about 15 minutes. Their weight on the hot, tender skin affords sufficient pressure to prevent the formation of swellings so often observed after a collar is removed. Normal circulation will establish itself gradually under collar pressure

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alone and the skin of the shoulders and neck will regain its tone and elasticity. After removal of the collar, bathe the shoulders and neck with clean water, to remove sand and dust that would otherwise remain in the hair, where it may not be reached with the horse brush. If swellings appear on the shoulders, use massage to remove them, and in addition apply a cold water pack during the night. If a gall appears do not grease it. Wash it with soap and water, dry thoroughly, and apply a weak solution of alum (½ ounce to a pint of water) or a solution of aloes in water (½ ounce to the pint). If the animal must be worked, use a chambered (cut out) pad over the spot to remove pressure. Animals' shoulders often become sore and the animals rendered unserviceable from the fact that the teamsters, when they take off the harness at night, instead of hanging it on a tree or putting it in the wagon, will throw it on the ground and make no attempt to clean the harness in the morning before using it. In consequence dirt and mud get on the collars and harness and chafe the skin. It is well to wash the shoulders occasionally in strong salt water.

Stabling.—In the field, stables will seldom be provided for the animals, but if possible, shelters of some kind should be constructed.

A picket line is established, the horses being tied to a manila or wire rope or a chain passed through the picket posts. There should be shallow trenches behind the horses to carry off the rain; the ground on which they stand having just enough slope to let the water run into the trenches. Or there may be a single drain in the center along the line of the posts. Constant attention must be given to keeping the ground about the picket line in good order. The ground about the picket line is swept daily, and all dung, etc., carried to the manure heap.

If stables are provided or shelters constructed, no manure or urine is to remain in the stable, except at night after the horses are bedded down; the stable police are to remove it as soon as it accumulates.

Each morning the stable or picket line is thoroughly cleaned. The bedding is taken up, that which is much soiled being separated for the manure heap, and the remainder spread upon the ground to dry.

At or before evening stables, the stable or picket line is again policed, the bedding is laid down and fresh straw spread on top of it. The bed should be soft and even, with the thickest part toward the manger.

The foregoing is but a digest of the more important rules for the care of animals, but is believed to be sufficiently comprehensive under average conditions. For a further discussion of the subject see Pars. 352 to 379 inclusive, of the Drill Regulations and Service Manual for Sanitary Troops.

When loading animals on cars except in hot weather, pack as many animals in the car as possible, as they will ride better than if loosely packed. If an animal happens to fall down in the car it will be almost impossible for it to get up, and the probabilities are it will be trampled to death. For this reason load sick or injured animals in a car by themselves, and build separate stalls for each animal, if practicable. Before loading

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examine the car carefully to see that the floor boards are not rotten or broken, that the sides are secure, and that there are no projecting nails or splinters. The car should be clean, and the floor covered with sand, sawdust, or straw. Where cleats on the floor are not used it is advisable to have toe calks on the animals' shoes. The man in charge should be provided with a candle-lantern, a bucket and a hatchet. Where the boards on the side of the car are not close together, an animal is liable to get his hoof between the boards, and when other means fail to disengage it, a hatchet should be used to cut away a part of the board. In loading animals, use the railroad platform or the loading ramp found at railroad stations, or make a ramp, well supported and with strong sides. Lead the animals by halters and straps up the ramp and into the car, and take off the halter. The first animal should be led to one end of the car and the second to the other end, leaving the center of the car for the last animals loaded. Arrange the animals so that the alternate ones shall face in the same direction.

Do the loading quietly, and have the animals follow one another promptly so as to avoid delay. In some cases it may be necessary to blindfold an animal before he can be led into a car. An obstinate animal can be made to enter by holding its head up, twisting its tail, and pushing it by main force into the car. Before loading see that the door on the further side of the car is closed and fastened, and after loading is complete fasten the second door.

Where cars contain hayracks and water troughs, see that they are in good condition, and fill racks before loading. Animals should be unloaded and exercised at least once in twenty-four hours.

They should be watered and fed twice daily.

CARE OF SICK HORSES

In the absence of the veterinary surgeon, the horses on sick report are under charge of the stable sergeant, who reports daily to the surgeon for instructions as to their treatment.

In treating sick horses it is to be observed that very little medicine is ordinarily required, and that unnecessary doses do much harm.

If a horse sustains an injury, neglects his feed, refuses to drink, or gives any evidence of illness, it will be at once reported.

No horse on sick report will be taken from the stable or picket line for exercise or work without permission from proper authority.

If there be at any time a suspicious discharge from one or both nostrils of an animal, it must be immediately reported.

To prevent contagion, an animal that shows any symptom of glanders must be isolated at once, and confined or tied up in some locality where no other animal can come into contact with him.

A glandered horse should be killed as soon as possible, the stall in which he stood torn down and all the woodwork burned and the ironwork disinfected; or, the stall is closed, and must remain empty until the

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rack, manger and every part of the iron and the woodwork, as also the vessels used in watering and feeding and saddle and bit, have been three or four times thoroughly washed with a 5 per cent. solution of carbolic acid or a two part solution of cresol. All parts to which it has been applied should be thoroughly scrubbed with hot water to remove the poisonous salt. The application of lime wash to all stalls, after complete disinfection, is desirable. Small articles, such as bits, etc., can be disinfected by keeping them immersed for half an hour in boiling water. All articles of little value that have been used with a glandered horse, such as halters, bridles, horse cloths, saddle cloths, blankets, nose bags, currycombs, brushes, etc., should be destroyed.

Stables occupied by infected or suspected horses should be disinfected daily by washing exposed surfaces with a 5 per cent. solution of carbolic acid. Nose bags, halters, buckets, used for drinking water, etc., should be carefully washed with the same solution or with boiling water.

CARE OF HARNESS

Harness should be examined every day. Note particularly if any stitches are broken, if any parts of the leather are worn thin, badly cracked, or cut, and if any of the buckles, toggles snaps, hames, chains, bits, and rings are cracked or broken.

Should any defect or weakness be noted, have the same remedied at once.

Do not allow the harness to be thrown on the ground where it will get muddy and dirty, for when the mud hardens and rubs against the skin, sores will result that may render the animal unserviceable for weeks.

In stitching harness, see that knots are not left on any part of the leather which may come into contact with an animal's body. Avoid these knots by using two double or back stitches at the beginning and end of each row of stitching.

Sew the harness, and do not use rivets, especially if the leather has plenty of life and is not extra solid. Use the best linen shoe thread with wax ends in sewing. The wax should be the spring, summer or winter kind, depending upon the season. Buckle the collars when removed from the animals.

Harness should be cleaned at least twice a month, and whenever it gets muddy.

For this purpose use a bucket, lukewarm water, sponge, harness soap, harness dressing, neats-foot oil and lampblack. A good harness soap can be made of 2 parts castile soap and 1 part neats-foot oil boiled together.

For ordinary cleaning the following instructions should be observed:

Provide a rack to hang the harness on. Where no better arrangement is on hand, insert one end of the wagon pole between the spokes of one of the hind wheels of another wagon above the hub, and strap it to the axle.

Hang a set of harness on the pole, dampen the sponge in clean water

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and pass it over the harness until the dirt has become soft. Rinse out the sponge as often as necessary, and replace the dirty water with clean water frequently.

Now rub the sponge on the harness soap until you obtain a good lather, then give the harness a heavy coating of it, and keep rubbing the harness until all dirt is removed. In some instances it may be necessary to use a piece of wood to remove the dirt. After the harness is thoroughly clean, work up a very thick lather, coat the leather parts of the harness with it, and allow it to dry without further rubbing.

After the lather has been absorbed and the leather is dry, put on a light coat of harness dressing. To do this, use a perfectly clean sponge, touch the harness lightly, just enough to spread the dressing, and do not rub. Keep the dressing in an air-tight container when not in use.

When the harness has not been cleaned for some time, and is hard, it should first be cleaned as described above. Afterward take a pint of neatsfoot oil for each single set of harness to be cleaned, pour it in a pan and mix with it lampblack in the proportion of one teaspoonful to each pint of oil, and stir this mixture until it has a glossy black appearance. In cold weather, heat the oil until it is lukewarm, but never hot, before using on harness. Apply this mixture with a small sponge, rubbing it well in. Allow about forty-eight hours to elapse before using harness again. In cold weather, allow harness, after being thus oiled, to hang near a fire for an hour.

After the leather is thoroughly dried, apply harness dressing as described above.

"When wagons are used every day, especially in a sandy country, have the wheels greased once a day. One to one and one-half pounds of axle grease per month will be found to be ample in all climates. Old grease should be scraped off before new grease is applied."

It is important that the wheels should be kept thoroughly greased at all times, or the axle will be injured and the axle boxes wear out. Always carry with the wagon a few extra wagon parts, so that minor repairs may be made at once. The wagon should be inspected morning and evening to ascertain what parts if any are broken, that the tires are tight, axle nuts well screwed on, etc.

For waterproofing canvas covers on hospital ambulances, make a mixture of the following ingredients:

To each gallon of raw linseed oil add 12 ounces of beeswax, 1 pound of white lead, and 12 ounces of common resin. Boil this mixture, stirring it at the same time, and apply it while warm to the upper side of the canvas. Be sure to wet the canvas with a sponge on the under side before applying this mixture.

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REPORTS AND RETURNS PERTAINING TO THE REGIMENTAL SANITARY EQUIPMENT

Name of report	Form	No. of copies	To whom sent	Remarks
Monthly				
Account current.....	320, W.D.; 320*b*, W.D.	2	1 to S.G., 1 retained	For funds from sale of medicines to civilians. See Par. 509, M.M.D.
Report of issue of medicines to civilians	Letter	3	2 to S.G. 1 retained	See Par. 244, M.M.D.
Report of ordnance charges on payrolls	94, O.D.	2	1 to Q.M. who pays detachment, 1 retained	
Requisition for blanks.	37, M.D.	2	1 to D.S., 1 retained	
Requisition for medical supplies	35, M.D.	4	4 to D.S.	1 retained.
Statement of charges, quartermaster property	208, Q.M.-C.	3	2 to regimental supply officer, 1 retained	
Voucher for hospital laundry	330 or 330*a*, W.D.	2	2 to D.S.	1 original, 1 memo. See Par. 277 M.M.D
Semi-Annually				
Certificate of expendable ordnance property	.....	2	1 to accompany return, 1 retained	
Return of ordnance and ordnance stores	18, O.D. and cover	2	1 to Chief of Ordnance, 1 retained	Vouchers to accompany.
Statement of charges for ordnance property on payrolls	86, O.D.	2	1 to accompany return, 1 retained	
Occasionally				
Inventory and inspection report	1, I.G.D.	2	2 to inspecting officer	Both returned to surgeon and become vouchers to return.
Report of Board of Survey	196, A.G.O.	3	3 to regimental commander	do
Requisition for ordnance property	Letter	3	2 to regimental supply officer, 1 retained	
Requisition for quartermaster property	Letter	3	2 to regimental supply officer, 1 retained	
Requisition for medical supplies	35, M.D.	4	4 to D.S.	1 returned to surgeon (emergency requisition).
Return of medical property	17, 17*a*, 17*b*, and 17*c*, M.D.	2	1 to S.G., 1 retained	Upon complete transfer to another officer.

CARE OF THE SICK AND WOUNDED

Attention has already been called to the fact that the relation of the medical officer to the sick and wounded of a command differs from the

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relation of the civilian practitioner to his patients. Not only must the medical officer exercise the same degree of professional knowledge and skill in the treatment of the sick and wounded as does his confrère in civil life, but he must accomplish results with a minimum amount of equipment—medical and surgical—as transportation is always limited.

One of the chief sources of embarrassment to the civilian practioner translated into the field is the fact that he does not have the same wide range of variety in his selection of medical and surgical supplies as he has formerly enjoyed in the practice of his profession. The novice usually thinks that the supplies furnished him are inadequate, but they have been selected by experienced officers; have stood the test of time in both war and peace; and have been found sufficient. The most successful medical officer is he who accomplishes the best relative results with the least resources.

SICK CALL

At a stated hour each day, "sick call" is held. Usually, it is in the forenoon, sometimes after breakfast, sometimes after dinner. For marching troops, sick call is sometimes held before and after the march. At sick call the men of each organization who require medical attention are conducted to the infirmary by a noncommissioned officer, who gives to the attending medical officer the company sick report book showing the names of the sick. Sick call is not a suitable time for the careful examination and treatment of the sick, but its purpose is to determine as expeditiously as possible the number of men unfit for duty. Par. 206, M.M.D.; Pars. 1471 and 1472, A.R.

The medical officer, after examination, will note in the book, opposite each man's name, whether or not the disease of injury is "in line of duty" (see Instructions to Ward Surgeons in chapter on "Base Hospital," and Par. 448, M.M.D.) and whether the man is to be returned to "duty," remain in "quarters," or be admitted to "hospital." Should a case require further examination he may be directed to return at a designated time and notation to this effect made opposite his name on the sick book.

After a moving command has been in camp several hours and the men are rested, the surgeon holds sick call with greater deliberation than in the morning. All but trivial cases are transferred to a field hospital or otherwise disposed of. Those unable to continue the march are transferred to the hospital.

The conditions which most frequently call for attention among marching troops are saddle sores in the cavalry and injuries to the feet in infantry. The former are best treated by cleanliness, sponging with alcohol or 2 per cent. phenol solution, promptly opening all boils that form and aborting others by puncturing with a needle carrying phenol. The care of the feet of marching troops is a matter of great importance. (In the Franco-German War 30,000 German troops were at one time unable to march because of injuries to the feet.) Both shoes and socks issued to troops should

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have been fitted carefully under the supervision of the company commanders. This one matter alone will greatly increase the mobility and efficiency of the troops if conscientiously carried out. To break in the shoes, the owner should soak them, walk in them for about an hour till they have taken the shape of the feet, remove them, fill them with dry oats, sand, or other such material. When they have dried, the shoes should be well oiled.

Abrasions and blisters may be prevented if just before the march, foot powder (talcum 87 parts, starch 10 parts, salicylic acid 3 parts) be dusted into the shoes, or if the socks be covered with a stiff lather, well rubbed in, or if the feet be greased. A mixture of tallow or lanoline and alcohol is especially serviceable for this last-mentioned purpose. After the march, the feet should be washed in cold water, but only for a period long enough to remove dirt (soaking in water softens the skin), carefully dried and clean socks put on. The socks just removed should be washed and dried to replace next day those now being worn. If the water supply be scant, merely wiping the feet with a wet cloth will be found refreshing.

Feet that are tender may be hardened by bathing them with a solution of alum, tannin, alcohol or salts of lead or zinc. Corns should be pared down and protected by corn plasters. Ingrown toe nails should be cut straight across and cotton packed under their edge. Abrasions and other minor injuries may be painted with iodine and protected by adhesive plaster. Sprains are best treated by cold water and moderately light bandages. Chafing between the nates or on the inside of the thighs is relieved by absolute cleanliness and the usage of an astringent dusting powder. One containing equal parts of zinc oxide, boracic acid, bismuth subnitrate and talcum is quite efficacious. Treatment of blisters is considered elsewhere in this chapter in the section on Sanitation and Care of Troops.

A condition called irritable heart develops in some weak or immature soldiers as a result of severe marching, especially in hot weather. It is due to temporary dilation of the right heart or enlargement of the thyroid gland, but in many cases there is also a neurotic element. The pulse is rapid, irregular, weak, irritable, accelerated by slight exertion. A murmur may be heard over the heart. Prolonged absolute rest and the use of digitalis in full doses give the best results.

SURGEON'S MORNING REPORT OF SICK

Immediately after sick call, the surgeon will forward to the Adjutant a report of the sick of the command on the prescribed form. The Adjutant, after entering in the proper columns the strength of the command for the day, will return the report to the surgeon. Par. 1471, A.R.

In case the regiment is operating independently, the sick who need hospital care are admitted to the Regimental Hospital and there cared for. If the regiment is part of a mobilized division, their cases will be transferred to the hospital designated for their reception and care. As the regiment will

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seldom operate independently, it will be seen that the Regimental Surgeon, as far as the more serious cases are concerned, has but to decide whether or not they need hospital care, and, if they do, make the diagnosis, give temporary treatment and transfer them, as described under "Transfer of Patients."

SICK AND WOUNDED RECORDS

An important duty devolves upon the surgeon in the proper preparation and preservation of individual records of sickness and injury in order that claims be adjudicated with justice to the Government and the individual. The records required in the threatre of operations in war differ from those required in time of peace or in home territory in time of war and accordingly will be separately discussed.

In Peace or in Home Territory in War.—A full record of the sick and wounded is to be made on register cards (Form 52, M.M.D.) and these cards should be started at sick call for all cases admitted to hospital, confined to quarters, or excused from any duty, etc., as prescribed in Pars. 428 to 431, M.M.D. These cards collectively constitute the register of patients, and a case carded on them is said to be on the register. Pars. 427 and 428, M.M.D.

Register Cards.—The regulations governing the preparation of these cards are given in the paragraphs referred to and a careful study of the latter is urged upon all medical officers. Pars. 437 to 454, M.M.D.

In making diagnosis and recording disabilities, the regulations must be most carefully and rigidly followed. The surgeon should cautiously scrutinize every register card to see that the diagnosis conforms to the adopted nomenclature. Pars. 455 and 456, M.M.D.

Report of Sick and Wounded.—This report, which is required monthly, except in the theatre of operations, comprises (1) the report sheet (Form 51, M.D.), which provides for general information and numerical tabulations concerning the command; (2) the nominal check list (Forms 51*a* and 51*b*) for a chronological list of cases registered; (3) the report cards (Form 52, M.D.) for details of several cases. Detailed directions for the preparation of the report sheet and the nominal check list are given in the paragraphs referred to. Pars. 457 to 468, M.M.D.

Diagnosis Tags in the Theatre of Operations.—During and after an engagement, diagnosis tags—which are to be made out in duplicate, one being an impression copy—will be attached to all wounded and dead as soon as practicable. The tag will be made out by the first member of the sanitary personnel who treats the man previous to his admission to a hospital on the line of communications. Pars. 567 to 570, M.M.D.

Duplicates of diagnosis tags will be disposed of as follows: Par. 571, M.M.D.

(*a*) Those made out by the sanitary personnel for officers and soldiers of their own regiment will be retained by the surgeon and forwarded with the monthly list of sick and wounded.

See Appendix II—67a.

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(*b*) Those made out for officers and soldiers of other commands will be transmitted as soon as possible after the close of each day of an engagement to the Division Surgeon, accompanied by the check list required to be sent to that officer.

The original tags will be disposed of as follows: Par. 572, M.M.D.

(*a*) Those of wounded who are returned from aid stations to the firing line without going farther to the rear will be removed and retained by the Regimental Surgeon.

(*b*) Those of wounded returned to the regiment from dressing stations or from the station for slightly wounded will be removed upon their reporting for duty and turned over to the Regimental Surgeon.

Tags of members of the regiment admitted to a field hospital and retained there for definitive treatment, of those of the regiment admitted to a hospital on the line of communications and of those of the regiment who die while in transit from the field to hospital will be transmitted to the Regimental Surgeon by the Division Surgeon. Pars. 572 to 573, M.M.D.

List of Sick and Wounded.—A list of sick and wounded will be kept day by day by the Regimental Surgeon on Form 53, M.D., as directed in the instructions printed on the form and in the paragraphs referred to. Pars. 575 to 577, M.M.D.

This list should be made in duplicate, and at the end of the month covered by it, the original thereof, accompanied by all the diagnosis tags, both originals and duplicates, will be sent through medical channels to the Surgeon General.

Report of Casualties.—As directed in Par. 579, the casualties are entered daily in two groups: first, those suffered by the personnel of the regiment; second, those occurring among the personnel of other organizations. An extra carbon copy of that portion of the list containing entries of the first group will be made and sent immediately to the regimental commander; and an extra carbon copy of that portion of the list containing entries of the second group will be made in a like manner and immediately sent to the Division Surgeon, with the duplicates of the diagnosis tags pertaining to the cases enumerated thereon.

Civilians.—Civilian employees with a command in the field are entitled when necessary to admission to hospital, and they may also be furnished medical supplies prescribed for them by a medical officer. Pars. 1457 to 1458, A.R.

Civilian employees are required to pay for all medicines so obtained and when in hospital, must pay $0.25 per day for medicines; and $0.40 per day, if on the footing of enlisted men, or $1.25 per day, if on the footing of officers, for subsistence. Par. 1460, A.R.

The money collected for medicines will be accounted for and disposed of, as outlined under "The Regimental Sanitary Equipment." Money paid for subsistence will be taken up as part of the Hospital Fund.

Deaths.—Whenever the death of an officer, or enlisted man occurs with a command in the field, the surgeon will immediately report in writing to the

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regimental commander the name of the deceased, with rank and organization if he was an enlisted man, the date, time, place and cause of death, and the present location of the body. Similar data concerning the death of civilians should be reported showing the department and capacity in which employed. Par. 218, M.M.D.

In the case of an officer or enlisted man, the report will also show whether or not death occurred in line of duty, and whether or not the result of misconduct on the part of the deceased. Pars. 162½, A.R.

Infectious Diseases.—The entire question of infectious diseases is fully discussed in the paragraphs referred to. Attention is especially called to the Malarial and Syphilitic Registers (Forms 56 and 78, M.M., respectively) required to be kept of cases suffering from these diseases. Pars. 183 to 200, M.M.D.

Reports of Epidemic Diseases.—On the appearance of the first recognized case of typhoid fever, paratyphoid fever, measles, diphtheria, cerebrospinal-meningitis, or other epidemic disease with a command, the surgeon will at once report the same, and the nature and extent of the epidemic, to the regimental commander, sending at the same time a duplicate report direct to the Department Surgeon, and a triplicate report direct to the Surgeon General. Pars. 201 to 203, M.M.D. When serving with a division that Division Surgeon instead of the Department Surgeon should be notified.

The continuance of the epidemic, its progress and decline, its origin or importation, the measures taken for its suppression, and such other information in relation thereto as may be important or interesting will be noted from month to month in the sanitary reports.

Measures for Prevention of Spread.—The measures to be taken to prevent the spread of such diseases are discussed under "The Sanitation and Care of Troops."

Refusal of Treatment.—All enlisted men are required to take the treatment, medical or surgical, deemed necessary by a medical officer, for the cure or removal of a disability that prevents the full performance of any and all military duties that properly can be required of the soldier, provided that such treatment does not involve appreciable risk to life. Par. 220, M.M.D.

Superseded.

In the event that an enlisted man refuse to submit to such treatment charges should be preferred against him for violation of the 96th Article of War.

Transfer of Patients.—Patients may be transferred, upon proper military authority, from the regimental infirmary or hospital to another hospital, for observation or to obtain better treatment or hospital accommodations. Pars. 214 to 215, M.M.D.

In transferring a patient, a duplicate of the register card will be made out, headed "Transfer Card," and signed by the transferring officer. It will be sent to the surgeon of the receiving hospital in care of the patient, if he is to be unattended enroute; in the care of an attendant, if there be such; or else by mail, at the discretion of the transferring officer.

See Appendix II—69a.

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REPORTS AND RETURNS PERTAINING TO SICK AND WOUNDED

Name of report, etc.	Form	No. of copies	To whom sent	Remarks
Daily				
Daily field report of patients	83, M.D.	2	1 to proper medical superior, 1 retained	Required during campaign.
Surgeon's morning report of sick	71, M.D.	1	Regimental commander	Returned to surgeon after serving its purpose at headquarters
Monthly				
List of sick and wounded:	53, M.D.	2	1 to S.G. through D.S., 1 retained	As a substitute for report of sick and wounded, in the theatre of operations
Report of sick and wounded	51, 51*a*, 51*b*, and 52, M.D.	2	do	
Voucher of commutation of rations of enlisted men sick in hospital	351, W.D.	2	1 to regimental commander, 1 retained	Only when a regimental hospital is maintained
Occasionally				
Certificate of indebtedness of civilian employee for hospital service	49*a*, M.D.	3	See Par. 1461, A.R.	
Diagnosis tag.....	From book of tags	1	See Pars. 567 to 572, M.M.D.	Attached to wounded soldier. Retained copies accompany See list of wounded, Pars. 567 to 572, M.M.D.
Notification to local board of health of appearance of infectious disease	Letter or local form	1	Board of health	See Par. 203, M.M.D.
Report of appearance of epidemic disease at or near station	Letter	3	2 to regimental commander	See Par. 201, M.M.D.
Report of appearance of epidemic disease in command enroute to a new station	Letter	4	3 copies as in preceding case, 1 to surgeon new station	do
Report of death of officer, enlisted man or civilian	Letter	3	2 Regimental commanders	See Par. 218, M.M.D.
Report of death of a medical officer or a sergeant, first class	Letter	3	1 to D.S., 1 to S.G.	See Par. 219, M.M.D.
Special reports of interesting cases	Letter	1	S.G. through medical channels	See Pars. 421 & 422, M.M.D.
Special reports in campaign			As itemized in Par. 558, M.M.D.	

When a detachment is broken up, the surgeon will complete all reports and returns, and forward them to the Surgeon General.

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SANITATION AND CARE OF THE TROOPS

Since the Regimental Surgeon is the adviser of the regimental commander in all matters affecting hygiene and sanitation, he must be thoroughly acquainted with those subjects, and particularly with their application to the military service. It is a truism that troops that have been debilitated or diminished by disease, cannot fight as vigorously as healthy ones, who can bring all their forces in vigor to the firing line. The success or failure of a number of campaigns has been determined and others largely influenced by the healthfulness of the troops engaged. Plague caused the withdrawal of Sennecharib from Judea, and contributed in no small degree toward the failure of several Crusades. It is believed that it was this disease which precipitated the downfall of Athens in the Peloponnesian War. Within a month it destroyed 6000 men of a Russian army in Turkey in 1828. Cholera terminated military operations in Turkey in 1821, and caused the loss of 10,000 men in the French and British troops in the Crimea in 1854. It greatly depleted the forces of Prussia in the war between that state and Austria and those of Turkey in the Balkan War. Yellow fever destroyed 50,000 out of 58,000 men sent by Napoleon to Hayti in 1802, and indirectly thus made possible the acquisition of Louisiana and Florida by the United States. Malaria caused Brennus to retreat from Rome, and in the year 208 destroyed more than half a Roman army of 80,000 men in New Caledonia. In more modern times it practically exterminated the British expedition to Walcheren and the French expedition to Madagascar.

Dysentery has ravaged many armies. It contributed to the defeat of the Prussians at Valmy—a battle which made possible the fruition of the French Revolution and the consequent development of Western civilization. Typhoid fever infected 73,000 German troops in the Franco-Prussian War, one-third of the British forces in South Africa and almost one-fifth of the U. S. troops in the Spanish-American War. Excessive sickness caused the failure of two attempts made by Continental forces to subjugate Canada and had a profound effect upon American history.

In British wars during the past thirty years, there have been 40 hospital admissions and 4.8 deaths from disease, for every man killed or died of wounds.

Having found a sanitary defect, the surgeon should assure himself that it is *real* and not *theoretical;* should seek a practical remedy, and then submit the necessary recommendations to the regimental commander. By a "practical remedy" is meant one which takes into account not only its suitability to the particular end in view, but also the feasibility of effecting it. When the remedy which is theoretically the best is too difficult to procure, the surgeon should choose some other more feasible, if it will reasonably answer the purpose. The surgeon must be resourceful, and extemporize all facilities available to obtain results. The duty is not fully performed merely when recommendations has been made. Often it must be followed up diligently until the desired result is secured.

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The manner of submitting such recommendations varies in different regiments, some commanders desiring verbal, other, informal written, and still other formal written reports. In the event that a verbal or informal written report is not productive of results, a formal written report should be made. In such cases, the medical officers has thrown upon the regimental commander the responsibility which up to this time rested entirely or in part upon himself. If desired, such a written report can take the nature of a special sanitary report (see "Sanitary Reports").

CAMPS

It is the duty of the surgeon to assist in the selection of camp sites, and in the performance of this duty, he should be governed by the following desiderata: Par. 238, F.S.R.

1. The ground should accommodate the command with as little crowding as possible, be easily drained, and have no stagnant water within 300 yards.

2. The water supply should be sufficient, pure, and accessible.

3. There should be good roads to the camp and good interior communication.

4. Wood, grass, forage, and supplies must be at hand or obtainable.

Closely cropped turf with sandy or gravelly subsoil is best; high banks of rivers are suitable, provided no marshes are near.

In hot summer months, the ground selected should be high, free from underbrush, and shaded with tress if possible.

In cold weather, ground sloping to the south, with woods to break the north winds, is desirable.

Old camp grounds and the vicinity of cemetries are undesirable.

Marshy ground and stagnant water are objectionable on account of the damp atmosphere and the annoyance and infection from mosquitoes. Ground near the foot of a hill range generally has a damp subsoil, and remains muddy for a long time. Thick forests, dense vegetation, made ground, alluvial soil, punch-bowl depressions, inclosed ravines, and dry beds of streams are unsuitable camp sites.

Camp sites should be selected so that troops of one unit need not pass through the camp grounds of another.

As a protection against epidemics, temporary camp sites in the theatre of operations should be changed every two or three weeks.

When troops are to remain in camp for some time, all underbrush should be cleared away and the camp made as comfortable as possible.

The foregoing are the ideals to be sought, and are usually obtainable in time of peace. In war time, there is often little choice in the selection of camp sites. Here the principles of sanitation must give way to the military necessity and troops may have to camp many nights on objectionable ground. However, sanitary considerations should be given all the weight possible, consistent with tactical requirements, and we must approach the ideal as nearly as possible. Troops occupying an insanitary site may suffer greater losses through disease than in the battles of a long campaign.

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The forms and dimensions of camps for regiments are given in Appendix 1, pages 174, 175 and 176, F.S.R. While these forms should be followed whenever possible, the available space and changes in the size of organizations sometimes necessitate many changes of greater or less degree.

Shelter.—To maintain the efficiency of a command, the troops must have shelter.

In time of peace, troops in the field are generally sheltered under canvas.

In time of war temporary use may be made of public buildings in our own country when necessary. In enemy country public and private buildings may be used to shelter troops. Pars. 232, 233 and 234, F.S.R.

When troops are sheltered under canvas, they are in camp. When resting on the ground without shelter, they are in bivouac; when occupying public or private buildings in towns or villages, they are billeted; when occupyings huts especially erected, they are in cantonment. Cantonments often develop through improvements of camps—huts or temporary buildings taking the place of tents.

It may seem out of place to speak of ventilation in the field, but experience shows that it is a much-neglected feature, and should, therefore, receive careful attention from the sanitarian, more especially in cold weather.

Men are prone to pack earth around the edges of their tents, and to contrive other means of shutting out cold air from tents or other shelters. In addition, tent stoves may be kept burning, or braziers of hot coals may be taken into the tents.

It is, therefore, essential, that orders be issued requiring tent flaps, or the doors of shelters to be kept at least partly open at night, that hoods of tents be elevated, and that inspections be made by officers to see that the orders are carried out.

Improvised Stoves.—Even though field ranges are not provided, excellent substitutes may be improvised. A cooking stove of any description possesses great and obvious advantages over the open fire.

WATER

There are no tests which can be quickly performed that will enable one to render an immediate verdict as to the character of a given water. The source of the supply, and in case of a stream, the character of the country through which it flows, should be carefully investigated if practicable. If there is a probability of seepage from privies, stables, or homes, or washings from the same, or drainage from nearby cities or towns, or there is any possibility of contamination from other sources, the water should be regarded as unsafe. Criteria in judging the safety of well water are: the proximity or absence of possible sources of contamination, the slope of the ground from such places to or from the well, and the presence or absence of intestinal diseases in neighboring habitations.

If the water is not *absolutely* above suspicion, some means of purification must be provided, and the method adopted faithfully carried out.

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In permanent or semi-permanent camps, water may be piped and delivered from standpipes conveniently placed. In other instances, water must be hauled and carried from wells, springs, cisterns, streams or other sources.

The regimental commander should designate the places for obtaining drinking and cooking water, for watering the animals, for bathing, and for washing clothing. If the supply be from a stream, these places should be located in the order named, from upstream down. Guards should be posted to enforce proper use of the water supply. Par. 240, F.S.R.

Means of Purification, Hypochlorite Method.—At the present time, each company or detachment is supplied with a Lyster water bag, and some glass tubes containing hypochlorite of lime. The bag is filled with water and then there is poured into it a cup of water, with which has been thoroughly mixed the contents of one hypochlorite tube. The water should then be allowed to stand for one hour before use. The bag should be covered to prevent the entrance of dust, etc. One tube contains sufficient of the chemical to make the proportion to one bag of water 1 part to 150,000 or 1 part available chlorine to 300,000 parts of water. Or Halazone may be used.

Boiling.—Boiling is a simple and effective means of sterilizing water but is sometimes impracticable on account of the lack of fuel. The water should be boiled for twenty minutes, then cooled and aerated, in order to remove the flat taste caused by expulsion of its contained gases.

Wells.—If facilities are available and the camp is to be occupied for many months, deep wells should be driven.

Care of Purified Water.—The containers used for carriage or storage of water should be clean and kept covered. Canteens should be filled with boiling water each week.

Bedding.—Men should not lie on damp ground. In temporary camps and in bivouac they should spread their ponchos or slickers on the ground; or raise their beds from the ground, if suitable material such as straw, leaves or boughs can be obtained. In cold weather, when fuel is plentiful, the ground may be warmed with fires, the men making their beds after raking away the ashes.

In permanent or maneuver camps, 30 pounds of straw a month for bedding is furnished to each enlisted man. Elsewhere in the field, such quantity of straw or hay for the bedding of troops is authorized as the commanding officer, after conferring with the medical officer of the command, may deem necessary to preserve the health of the troops. Par. 1084, A.R.

If bed sacks are provided, they should be filled with straw or hay and thus a mattress be improvised. In more permanent camps, cots are furnished, or, if not furnished, excellent substitutes can be erected of reeds or baling-wire interwoven.

Clothing.—The government provides suitable clothing for all varieties of climate and weather, and regulations prescribe just what number of each kind of garment the soldier is to be provided with.

As far as the regimental medical officer is concerned, his duty will be

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to make every effort to see that worn-out clothing is replaced, lest the men suffer for lack of sufficient body covering; and also to see that the men dress properly for the season and climate.

Personal Hygiene.—Nowhere must more efforts be made to secure cleanliness of the body and clothing than in the field. Here men are thrown into most intimate contact, and facilities for obtaining cleanliness often must be created. A dirty man is a source of discomfort to his tentmates, because of the disagreeable odors that emanate from his body or clothing; and becomes a positive menace to the health of those about him through his instrumentality in transmitting camp diseases.

Exercise.—In the field, men will usually obtain sufficient bodily exercise through the daily drills, practice marches, etc. In the trenches they often go through such setting up exercises as are safe.

In standing camps, however, baseball games and other sports should be encouraged.

Healthful exercises and physical recreation do much to lessen the desire for sexual indulgence, and help to keep the troops contented.

Food.—The quantity and variety of food in the field may be limited, and cooking facilities are few and imperfect. On the other hand, because of the greater amount of work performed, the men have heartier appetites, than when in garrison.

The aforementioned conditions will vary considerably, for while amounts and variety of food will be small and cooking facilities imperfect on the march, the conditions in permanent camps, will approximate those in garrison.

The medical officer must carefully inspect the mess of each organization assuring himself that the ration is well balanced; the food sufficient in quantity, excellent in quality, properly cooked and in suitable variety. Economy, good management and *cleanliness* are even more essential in the field than in garrison.

The following are a few of the regulations enforced in orders:

1. Fresh meat, bread and vegetables will be inspected by a medical officer as to quality, when issued.

2. Food will be prepared and served in a cleanly manner. It will habitually be protected against sun, dust and flies.

3. Company cooks, mess equipment and kitchen areas will be kept clean and neat at all times. The kitchen police will be a permanent detail. Suspected carriers of disease will be relieved from duty in the kitchens until recovered.

4. Individual mess kits will be cleaned at the cook tent immediately after use. Cooks will maintain a supply of boiling water for this purpose.

5. Kitchen utensils will be cleaned thoroughly with soap and boiling water immediately after use.

6. The keeping in tents of uneaten portions of food and rations is strictly prohibited.

7. Men will patronize only those places (in which food, ice cream or

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drinks are sold), which are free from flies and maintained in a cleanly condition.

8. No hucksters will be permitted in camp, except for the delivery of supplies to general messes.

9. The bringing of melons into camp is prohibited.

10. Itinerant venders will be allowed to sell to troops in the vicinity of the camp, only such articles as are in original packages. The sale of all beverages to such persons is prohibited.

11. To enforce this order a guard will be posted, if necessary, near the vender to prevent men from making unauthorized purchases.

Other regulations governing sanitation in the field are found in the chapter on Maneuver Camps.

Bathing.—Proper facilities should be provided for bathing. In semi-permanent or permanent camps, whenever practicable, pipes are laid and at least one faucet provided for each organization. If possible, shower baths are also installed, one per battalion or one per company. In the absence of water systems with which pipe connections may be made, water must be hauled to the camp or a stream used, if there be one in the vicinity. The latter is ideal in warm weather, but in the winter months some other arrangement must be made, and here the ingenuity of both the line and the medical officer is apt to be greatly taxed.

If no other means are available, a tent can be set aside or a shelter built of wood or old canvas. A man can heat a can of water over the kitchen fire and take it to this tent for his toilet. In the British service divisional baths are provided, accommodating 3000 men a day.

An improvised shower can be readily made from an empty oil can, a piece of rope and a pulley. The top of the can is removed and a number of small holes punched in the bottom. A handle of rope or wire is now attached to the top of the can, and to this one end of the rope is fastened, the other end of the rope being run through the pulley, which is fixed to the top of the shelter. The water is then poured into the can, which is quickly elevated by pulling on the free end of the rope. As soon as the can is sufficiently high, this is tied to the tent pole or some other convenient place.

Men should be required to bathe regularly, the number of baths per week depending upon the conditions of service and the climate. Company officers should be held personally responsible that their men take the required number of baths. While bathing, men should give careful attention to the hairy parts of the body. A daily cleansing of the face, head, ears, neck, arms, and hands should be insisted upon. Secretions around the prepuce and foreskin should be removed.

Bowels.—Men should be taught not to neglect the daily evacuation of the bowels, for neglect in this respect is responsible for much discomfort and later perhaps, illness with consequent non-effectiveness. On the march a man should invariably endeavor to evacuate the bowels at the first halt, if he has not already done so before leaving camp. In this connection, men should be required to be as cleanly and neat at the latrines in the field as in

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a tiled room in garrison. If possible, arrangements should be made to enable the men to wash their hands immediately after leaving the latrines.

Eating.—The soldier has little or nothing to say with regard to his menu, but he has absolute control over how he shall eat what is put before him.

He should be taught to avoid gluttony, to eat slowly and to thoroughly masticate his food. Liquids should be used sparingly at meals.

Every effort should be made to discourage the practice—especially noticeable in the young soldier—of indulgence in pastries, soft drinks, and fruits, at irregular hours. Not only is irregular eating prone to produce digestive disturbances, but the pastries, etc., sold on the outskirts of camps, or sometimes within their borders, are not of the best quality, and are apt to be prepared and served amid uncleanly and insanitary surroundings.

Feet.—The care of the feet in the field and especially on the march is most important. The feet should always be washed when the body is bathed, and daily if possible.

On the march, the medical officer has no more important duty than the care of the feet, and the marching ability of his organization will evidence his attention or lack of attention. After camp has been made, every man should be required to bathe his feet, preferably in cold water, particular care being taken to clean between the toes. Clean socks should be put on, and the soiled ones immediately washed.

The regimental commander should be requested to order that all men having any abrasion or blisters of the feet report to the infirmary and not attempt to treat themselves, the latter being permitted only in emergencies. The men are apt to use dirty needles or knives when opening blisters, and are likely to improperly apply the adhesive tape, with the result that the latter puckers and causes an extension of the trouble on the following day.

The method here given for the treatment of blisters was devised and tried out by the writer on a 172-mile march out of Mexico, during which but four men fell out because of foot troubles.

The blister and the surrounding skin are painted with iodine; then a small fold of the raised epidermis is caught between the blades of a pair of scissors and excised, leaving a small opening oval in shape about $\frac{1}{16}$ by $\frac{1}{8}$ inch. In the case of large blisters, one or two additional openings may be made in the same manner. When the fluid has escaped, the area is again iodined, carefully dried and covered with adhesive plaster. Narrow overlapping strips of the latter are applied, so as to exactly conform to the foot surface. In applying the plaster, the ends should be brought up over the sides of the foot to prevent rolling and curling with consequent additional irritation to the sole of the foot.

Hair and Beard.—The hair should be kept short and combed and brushed at least once daily. Once or twice per week it should be washed. If a beard is worn it should be kept neatly trimmed, brushed daily and frequently washed.

Teeth.—The teeth should be cleaned twice daily. Upon the first appeaance of signs of decay, the dental surgeon should be consulted, if

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one is available. The surgeon should arrange to have the dental surgeon inspect the teeth of the men of his organization at least once in every six months, and to do whatever work is necessary to keep the teeth in good condition.

Toilet Articles.—Each man is required to own his own toilet articles, but at times supervision is necessary to see that he uses his own and not his comrades. This is especially true of shaving articles. Men should be encouraged to shave themselves. The company barber must be required to take the necessary measures in regard to the sterilization of his razors, shaving mugs, etc.

Laundry.—Laundry presents many difficulties in the field, but these should be overcome if at all possible. When camped on a stream a section is set aside for this purpose, and men should be required to not only wash their clothing but to boil it after washing if fuel be available. If running water is provided, care must be exercised regarding the disposal of the waste water and it must not be allowed to soil the camp grounds. If there are laundries in the vicinity of the camp or laundresses apply for the work, the medical officer should inspect the plants or the houses of individual laundresses before permitting the men to send their laundry and at frequent intervals thereafter. In Europe, divisional laundries are established in some armies. At some points laundry is distributed among selected laundresses, in others, automobile laundries operate near the front.

Physical Inspections.—Twice in each month, a medical officer, accompanied by the company or detachment commander, is required by regulations, to make a thorough physical inspection of all the enlisted men (except married men of good character) of each organization belonging to or attached to the regiment. These inspections will be made at times not known beforehand to the men and preferably immediately after a formation. The dates on which the physical inspections of the various organizations of the regiment are made will be noted on the monthly sanitary reports.

At these inspections a careful examination of the feet, footwear and personal cleanliness of the men will be made, as well as careful observation for the detection of venereal diseases.

When encamped with other troops, the camp surgeon will render the monthly sanitary report, but when the regiment is alone, this duty falls to the lot of the regimental surgeon.

The report should be made on Form 50, M.D., which is self-explanatory, and a duplicate should be retained. The original is to be forwarded to the regimental commander, who will send it on to higher authority, at the same time furnishing the surgeon with a copy of his indorsement, for filing with the retained duplicate.

Should occasion demand, the surgeon may render a special sanitary report at any time during the month; this to be in the form of a letter and to go through the same channels as the monthly report.

Infectious Diseases.—Pars. 182 to 200, M.M.D.

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Only such measures as are peculiar to the military service will be considered here, as medical officers are expected to be familiar with the approved methods for preventing the spread of infectious diseases.

General Measures in Camp.—Upon the appearance of a case of measles, scarlet fever, cerebro-spinal-meningitis, mumps, diphtheria, chicken pox, or other infectious disease, in the command, the following routine preventive measures should be taken:

1. Transfer the patient immediately to the hospital designated for the reception of such cases.

2. Boil the patient's handkerchiefs, towels, sheets, pillow cases and underwear for twenty minutes; and disinfect his outer clothing and bedding by thorough exposure for several hours to direct sunlight, or by immersion in formalin solution, or by exposure to formaldehyde.

3. Thoroughly air and sun the interior of the tent by removing the canvas. Then remove the tent to a convenient location for isolation and quarantine of its occupants. Other men known to have been in close contact with the patient should be similarly isolated and quarantined. The duration of the quarantine should be that of the incubation period of the disease.

4. Examine twice daily all those in quarantine, and in addition examine once daily all members of the company or detachment to which the patient belonged. Suspicious cases should be sent to the hospital designated for their reception, with a memorandum stating briefly the symptoms—the latter to accompany the transfer card.

VACCINATIONS

All officers and enlisted men of the Army, and civilian employees with the command in the field, are immunized against typhoid and paratyphoid fevers and smallpox.

Typhoid and Paratyphoid Fevers.—The course of immunization against typhoid and paratyphoid "A" and "B" consists of three doses, ½ c.c., 1 c.c. and 1 c.c. respectively, given subcutaneously at intervals of from one week to fourteen days (preferably ten days) of the vaccine which is furnished by the Medical Department on requisition. This trivalent vaccine is given in the same manner as that heretofore given for typhoid fever. It contains in each cubic centimeter one billion typhoid bacilli, seven hundred and fifty million paratyphoid "A" bacilli and an equal number of paratyphoid "B" bacilli. It is to be given hereafter instead of the simple typhoid prophylactic. The same technic is used. This agent usually occasions more constitutional reaction than the typhoid prophylactic, due it is believed, chiefly to the paratyphoid "A" content. Immunity conferred is similar in value and duration to that following simple typhoid prophylaxis, but it prevents three infections instead of one.

A record is to be kept on Form 81, M.D. of each man prophylacticated. Should the soldier be transferred to another organization before completion of vaccination, a duplicate of the incomplete card will be sent to the surgeon of the new command.

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When the course is completed a report showing the date of such completion is to be sent to the soldier's company commander, in order that notation may be made on the soldier's service record.

Extension of the Requirement of Vaccination against Paratyphoid Fevers (General Orders, No. 93, July 14, 1917).

II. The first paragraph of section I, General Orders, No. 68, War Department, 1917, is amended so as to require all officers and enlisted men of the Regular Army, the National Army, and of the National Guard, and members of the Officers' Reserve Corps and the Enlisted Reserve Corps, in the Federal service, to be vaccinated against the paratyphoid fevers (A and B), as provided for troops designated for service overseas. The National Guard and the National Army will be vaccinated at mobilization camps. Members of the Officers' Reserve Corps and the Enlisted Reserve Corps will be vaccinated as soon as practicable after being called into active service. All civilians associated with the military forces of the United States, designated for service overseas, will be completely vaccinated prior to their arrival in Europe. (720.3, A.G.O.)

Typhoid Fever.—All officers, enlisted men and civilian employees must be immunized against typhoid and paratyphoid fevers as soon as practicable after entering the service. Persons over forty-five years of age, or those who have had typhoid (and para-typhoid) fevers or a complete course of immunization within three years, authenticated by records, are excepted. Par. 1, G.O. 4, 1915; Par. IV, G.O. 23, 1915.

All officers under forty-five years of age will be reimmunized after five years, and enlisted men on the first reënlistment following the original administration. Except when directed by the War Department, only two complete courses of immunization will be required. Reimmunization will consist of a series of three injections given exactly as in the first series.

Smallpox.—All recruits upon enlistment, and all soldiers upon reënlistment will be vaccinated against smallpox. When the first vaccination of a recruit is noneffective, it will be repeated at the end of eight days. Par. II, G.O. 30, 1914.

When troops are under orders to perform oversea journeys, or when, in the opinion of the surgeon responsible for the sanitation of the command, it is necessary, all officers and enlisted men will be revaccinated.

Officers should be vaccinated at least once in a period of seven years.

Record will be kept on Form 81, M.D. of all vaccinations. Company commanders will be informed of the dates and results of all smallpox vaccinations. Results will be reported as "successful," or "unsuccessful," the word "protected" not being permissible.

VENEREAL DISEASES

It is enjoined upon all officers serving with the regiment to do their utmost to encourage healthful exercises and physical recreation, and to supply opportunities for cleanly social and interesting mental occupa-

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tions for the troops; to take advantage of favorable opportunities to point out, particularly to the younger men, the inevitable misery and disaster which follow upon intemperance and moral uncleanliness, and that venereal disease, which is almost sure to follow licentious living, is never a trivial affair. Although the chief obligation and responsibility for the instruction of soldiers in these matters rests upon company officers, the medical officers should coöperate by occasional lectures or other instructions upon the subject of sexual physiology and hygiene and the dangers of venereal infection. G.O. 17, 1912; Par. 3, G.O. 71, 1913.

The surgeon must provide facilities for the administration of the prophylaxis which all men who expose themselves to the danger of contracting venereal diseases are required to take, immediately upon their return to camp.

A record will be made on Form 77, M.D. in the case of every soldier who reports for such treatment and the record will afterwards be authenticated by the initials of a medical officer. It will be considered confidential and need not be preserved longer than three months.

Should a soldier contract venereal disease, and investigation show that he failed to take the prophylactic, he should be reported, by letter, to the regimental commander, in order that he may be brought to trial by court-martial for neglect of duty, as required by existing orders.

At the semi-monthly physical inspection of the command, careful observance for the detection of venereal diseases is enjoined upon medical officers.

All cases of venereal disease, discovered at the semi-monthly physical inspections (see "Physical Inspections" under "Sanitation and Care of Troops") or at other times will promptly be subjected to treatment, but such patients are not necessarily excused from duty unless, in the opinion of the surgeon, this is deemed desirable. They will be made of record in the medical reports in any case. A list of those diseased but doing full duty should be kept both by the detachment or company commander and the surgeon, and the infected men should be required to report to a medical officer for systematic treatment until cured. While in the infectious stages the men should be confined strictly to the limits of the camp. When a venereal case, whether or not on sick report, is transferred to another command, the surgeon will send a transfer card giving a brief history of the case. Superseded.

Disease-transmitting Insects.—Because of the rôle of insects in the transmission of disease it is advisable to know something of the life, history, habitat, etc., of these pests, but it is much more essential that we know the means of their eradication.

Bed Bugs.—Bugs are not only probably capable of the transmission of disease, but are troublesome. Bedding and clothing should be examined frequently and carefully in order that their presence may be determined as soon as possible.

They may be destroyed by the use of gasoline, benzine, a saturated solution of corrosive sublimate, kerosene, steam or hot water and suds.

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If they are found in cots, the crevices of the latter should be treated carefully with the insecticide used. Insect powders often prove useless. Fumigation with sulphur or hydrocyanic acid is effective, though seldom practicable in the field. It has been said that if a blanket or clothing infested with these insects be placed on an ant hill, the ants will destroy all of the insects and their ova. The ants can later be brushed from the garments or bedding.

Fleas.—To eradicate fleas it has been advised that the small animals that are usually present with a command in the field, be driven off or at least be rid of these insects. If rats are prevalent, an active crusade against them should be inaugurated by traps or poisons. On the person insecticides may be used to advantage, and in habitations a good brand of pyrethrum.

Flies.—Prevention of flies is effected by absolute cleanliness of the entire camp site and its vicinity, especially kitchens, storerooms, latrines, dumps and picket lines. Flies are attracted by and bred in filth. If there be no filth, there will be no flies. Flies breed usually in from ten days to two weeks—in latrines sometimes two months. Their average maximum length of flight is 770 yards although they may be carried farther by the winds and may travel several miles with animals or vehicles.

Screening.—All kitchens and storerooms should be screened, by cotton net if metal screening is not available. If neither cotton nor wire net can be procured, a screening for food containers may be improvised from burlap potato sacks, by pulling out alternate threads.

Fly Traps.—Fly traps should be put around kitchens and storerooms. If latrines have become infested one may be put over an opened seat of each latrine box. Elaborate metal traps are neither necessary nor desirable. All that is needed is some pieces of wood, or a tin can, and some netting. A good bait to use in these traps is a mixture of vinegar, sugar and water, or better still, the following:

℞ Bran	3 pounds
Corn starch	1.5 pounds
Sugar	3 pounds
Yeast	4 cakes

Directions: Mix thoroughly and then add to 5 gallons of water. Stir well and allow to stand over night, when the mixture will be ready for use. In dry climates it should be renewed or moistened every few days.

Frequent cleaning out and rebaiting of the traps is usually a much-neglected essential.

Fly Poison.—If traps cannot be procured, or in conjunction with them, the following poison may be employed:

Make a sweetened solution of milk and water, and add to a quart of it, three teaspoonfuls of formalin. Place a piece of bread in a flat pan or plate, and on it pour enough of the sugar-water-formalin solution to moisten the bread and leave some excess. Keep the bread moist by additions of the solution as needed—at least twice daily. As formalin evaporates more rapidly than water the proportion of formalin should gradually be increased.

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Other Measures.—Fly paper and pyrethrum powders are used in kitchens and dining rooms.

Lice.—At each semi-monthly physical inspection of the command, careful examination should be made of persons and clothing for the presence of lice. The seams of the flannel outer and undershirts—particularly the seam under the arms—and the fork of the trousers are favorite hiding places.

The eggs are more resistant than the insect itself, and efforts should be aimed at their destruction.

Dry heat is more effective than moist. Fumigation with sulphur or hydrocyanic acid are excellent methods.

When a man is found to be infested he should clip or shave all hairy parts of the body; bathe in kerosene or gasolene, and then with soap and water; and then don clean clothing. The clothing removed should be fumigated, boiled, or else soaked in kerosene or gasolene. In Europe, ointments containing naptholin 10 per cent. or similar agents are much used. They are smeared both on the seams of clothing and on the person.

Mosquitoes.—To mitigate attacks from mosquitoes, men should use head or other nets. Underbrush near standing camps should be cleared away, and pools oiled or drained. In malarious regions moving commands should not camp near villages and men should take 5 grains of quinine daily at retreat. A camp should not be located near marshy ground if it can be avoided.

Ticks.—Ticks can be destroyed by a 0.2 per cent. solution of arsenious acid, or by crude oil. Small animals should be examined and if found infested, they should be rid of the insects.

Instruction of Troops of the Line.—All enlisted men of the line must be given instruction for at least twelve hours in each calendar year in methods of rendering first aid to the sick and wounded. Par. 1419, A.R.; Par. 155, M.M.D.

Medical officers should assist in this work by giving practical demonstrations. It is advisable to arrange with an organization commander to have his men present, while the medical officer is teaching first aid, etc., to the men of his detachment. Or a medical officer or a noncommissioned officer may be detailed to visit an organization at an hour arranged with its commander, and there give the instruction.

In addition to the demonstrations in first aid, arrangements should be made with the regimental commander, to give lectures, talks, etc., to all individuals and organizations, as far as practicable, in personal and camp hygiene.

Disposal of Excreta.—Human beings, like all other creatures, are destroyed by their excrement. Fecal matter and urine are the chief sources of danger to health to troops in the field, and for this reason the question of their disposal is one of the most important problems of field sanitation.

In more permanent camps, if water and sewage systems are available, the flush-trough or excavator system can be used. A later plan is to provide a concrete pit which acts as a septic tank under each latrine box.

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Latrines.—In the semi-permanent camps the trench or latrine system is used. Latrines often are objectionable, but the exercise of careful supervision on the part of the medical officer in the construction and care of them will thoroughly control the disgusting nuisances and serious menaces that attend those improperly built and carelessly policed.

Latrines are always to be placed on the opposite side of the camp from the company kitchens, and at a minimum distance of 50 yards from the tents of the men. They are so placed that the drainage or overflow cannot pollute the water supply or the camp grounds.

Construction.—The type and dimensions will depend upon the length of stay in the camp.

For one-night camps, straddle trenches (one per company) 1 foot wide, 2 feet deep and 12 feet long will suffice, or better, four per company, each 3 feet long.

When the camp is to be occupied for a few days, straddle trenches are rarely employed by American troops. The trench should then be at least 4 feet deep, 2 feet wide and 12 feet long, its length depending on the size of the command. It should provide for 8 per cent. of the company and allow 20 inches linear space to each man. To add to the comfort of the men, a seat may be provided by means of a small log or piece of timber supported on forked or crossed pieces at each end.

In more permanent camps, the latrines should be 2½ to 3 feet wide at the top, 2 feet wide at the bottom, and 8 or more feet deep, the depth being sometimes limited by the nature of the soil or the proximity of the ground water to the surface.

In camps where the length of stay justifies it and lumber can be obtained —but in limited quantities only—a latrine top having several openings, provided with hinged covers, can be constructed for use over straddle trenches. The self-closing top serves to prevent the entrance of flies and to some extent lessening the emanation of odors.

If sufficient lumber is available, box seats with covers for the seat openings should be provided for other trench latrines. The box should be about 16 inches high, the width of the bottom being about 6 or 8 inches more than the width of the top—the slope from top to bottom being in the back—and the box itself should be at least 8 inches longer than the pit to be covered by it. The reason that the bottom of the box is larger than the pit is to insure safe covering of the latter at all times, to prevent fouling the interior of the box.

The covers for the openings in the seats should be hinged—using pieces of old leather straps if no metal hinges are available—and some arrangement such as the fastening of blocks or a railing behind the lids should be devised to prevent the latter from being raised to a right angle. This is done in order that they will be self-closing.

On the inner side of the front of the box and in front of each seat pieces of tin should be fastened, being so arranged as to slope from top to bottom,

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downward and inward, in order to direct the flow of urine into the pit and prevent soiling of the box, leakage onto the ground, etc.

The ideal construction is to have the box seat rest on a wooden sill, as this prevents crumbling of the trench edges. This sill is usually 6 or 8 inches wide, and has perpendicular to it a collar 4 inches wide which projects into the pit which holds the sill in position. If this collar is not available, dirt should be piled around the edge of the box.

Extemporized latrine covers may be made from old clothing boxes, holes being cut in their tops, and covers provided, using scraps of leather or burlap as hinges. Improvise with what can be found.

A ditch should be dug around the latrine, at least on the sides from which drainage water might be expected. This is to prevent the flooding of the pit by a heavy rainfall, with consequent dispersion of its contents.

The latrines should be sheltered from the sun by means of canvas or brush screens, and made as private as possible.

CARE OF TRENCH LATRINES

When open trenches are used, each man must cover his deposit with some of the loose earth piled at the side of the pit, or the trenches may be burned out daily; or the crude-oil and lampblack method used, if materials are available.

Burning Out.—The burning out of latrines in order to destroy fly larvæ is satisfactory if done properly. Heat, however, penetrates the mass but slightly. To burn out a latrine, the box seat should be removed, 15 pounds of straw or brush and 1 gallon of oil distributed over the deposits, and then lighted. It is important that during the burning the mass should be constantly stirred up with a long pole. The drawbacks to this method are the personnel and time necessary to treating a pit, the danger of setting a box or latrine shelter on fire, the expense and the fact that the pits fill with ash or unburned straw or brush.

Use of Wood Ashes.—The sides and bottom should be sprinkled with wood ashes from the kitchen fires, after the daily burning out. The value of this procedure is due to the lye abstracted from the ash by moisture.

Lampblack Crude-oil Method.—A better method than burning out latrine pits is to treat them with lampblack and oil. Its efficacy is due to the fact that it blackens the interior of the box and pit and thus deters flies from entering. The lampblack to some extent serves as a deodorizer. It should be as fine as flour. Lamp or boneblack is mixed with crude oil in the proportion of 1 pound to 3 gallons. Once weekly the inside of the pit and the box seat is thoroughly sprayed with this mixture, by means of a foot and hand pump, with a spray nozzle, or it may be applied by a dauber made by fixing a burlap mop to the end of a stick. Once daily the deposits are covered with a layer of the mixture applied by a spray pump or sprinkling can. The advantages of this method are that it is easy to apply, is comparatively inexpensive, and the pit does not fill as quickly as when burned out.

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Care of Box Seats.—When newly built, the box seats may be flyproof, but frequent inspections and repairs are necessary to keep them so, as the lumber soon drys out, cracks, and warps; or the seat covers warp or their hinges break. Strips of wood, old canvas, tin or burlap should be tacked over the cracks, and where the covers have warped, a layer of burlap tacked around their edges will prevent the entrance of flies.

Filling in of Latrines.—When trench latrines become filled to within 2 feet of the surface, or when the command moves, the pits should be filled in with puddled clay. Lacking this, they should be filled with earth, covered with target cloth, and this with earth, to hold it in position, and prevent egress of flies.

Urinals.—Old pits should be marked with stakes so that the area will not again be used for similar or other purposes.

When open pits are used, separate urinals are not necessary, but when box seats are provided, separate urinals should be utilized. Such urinals may be provided by a can or wooden or metal trough, at each end of the box seat, and connecting these to the pit by means of gutters or pipes.

An old oil can may be cut in half and one half used as a urine trough, being connected with the pit by a pipe made by rolling up a piece of tin from another oil can or a hard bread box.

At night a large can or half barrel should be placed in each company street, the same to be carried away, emptied into the latrine pit and washed in the morning. They should be marked in a conspicuous manner, so that they may easily be located. During the day when not in use they should be kept clean and dry and exposed to the sun.

WASTES

The prompt and efficient disposal of wastes of all kinds, both liquid and solid, demands continuous and assiduous effort on the part of the medical officer.

If not disposed of systematically, wastes are apt to become scattered, create a nuisance, and afford a breeding place for flies.

The first and most important aim is to reduce all such wastes, particularly liquid, to a minimum.

In most camps, all solid garbage should be burned and all liquid garbage evaporated. No other disposition is usually feasible. In some camps, solid garbage is removed by contractors—who pay for the privilege—and liquids either evaporated in kitchen pits or hauled to a soakage pit provided with a lumber cover and a hopper. This covering is not necessary if the pit be several hundred yards away from camp. Septic action occurs, liquid waste is decomposed and flies will not breed in the edges of the pit until the ground is saturated, when the pit should be filled in and a new one dug. These pits may be constructed on the principle of a grease trap, *i.e.*, divided by a partition which extends almost to the bottom and retains floating fats in the proximal compartment.

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Kitchen Pits.—In temporary camps not likely to be used again, and when fuel is scarce, all kitchen wastes, both liquid and solid, which cannot be destroyed by the kitchen fire should be thrown into a pit, which should be filled in before leaving camp. Such garbage should be covered with earth as soon as it is thrown into the pit. This practice is permissible only when fuel is scarce, and for small commands operating independently. It should not be practised on the line of communications.

In camps of longer duration where there is a scarcity of fuel, all liquid wastes may be strained through a box sieve (burlap or wire screening) suitably placed over a pit, and the solid matter burned in the kitchen fire or an incinerator. To darken the pit and keep it free from flies, it is provided with a solid board or brush top, tamped with dirt, and provided with a detachable box sieve with cover. The pit should be about 2½ feet wide, 5 feet long and 4 feet deep when dug in clay. In more permeable soil, the dimensions may be somewhat reduced.

It is an excellent plan, in time of war especially, when all wastes should be utilized, to arrange with farmers or contractors to remove solid garbage in clean, covered cans. Lacking this, the most satisfactory and effective means of disposal is by incineration. In camps that are more or less permanent, if the organizations are provided with field ranges, the liquids can be evaporated under the range and the solids consumed by the same fire. G.O. 45, 1916, provides that garbage will be disposed of as follows:

Incinerators.—The liquid garbage is strained off and allowed to run slowly down over the heated rocks, where it will be evaporated. The solid matter can then be put on one edge of the fire until partially dried out and then pushed into the fire, a little at a time, and consumed.

Numerous types of incinerators have been devised. The essential requirements are simplicity in construction, ability to evaporate liquids, and to use the dried solids as fuel.

A combined stove, oven and incinerator may be constructed. These give good results if properly attended to. The materials used may be adobe brick, tin from old hard-bread boxes, and pieces of old wagon-wheel tires.

Disposal of Manure.—In camps of one or two nights, the picket lines should be thoroughly policed, and all dung, straw and hay raked up into small piles and burned.

In camps of longer duration, all manure and other refuse should be removed by contractors or hauled 1½ or 2 miles to leeward of camp, to a point distant from through roads leading into camp, lest insects be brought in by passing animals. Here every effort should be made to burn the manure. It may be placed in rows about 2 feet high, 4 feet wide and a wagon breadth apart, sprinkled or spotted with crude oil and ignited. Or it can be piled in heaps, each containing about 12 wagon loads, putting first a load of trash and empty cans, then a load of manure and so on. The trash burns readily while the cans provide air spaces and so assist in the incineration. This plan is not so satisfactory as burning in windrows.

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Neither of these measures is effective in wet weather or damp climates. In damp climates or during the wet months of the year, incinerators of the Panama type should be utilized. These are grates made of railway iron and are placed broadside to the prevailing winds.

If manure cannot be burned, it may be treated chemically, even though the pile be some short distance from camp. Either borax or calcined colemanite may be applied around the outer edges of the manure pile with a sieve, and then 2 or 3 gallons of water sprinkled over the treated mass; 0.62 pound of the borax or 0.75 pound of the colemanite should be used for every 10 cubic feet (8 bushels) of manure. Those who have used this method say this treatment has proven to be very effective.

Picket lines should be scraped to a depth of 1 inch, burned over with crude oil, 10 gallons per line, once weekly.

Waste.—The waste from kitchen pits should be placed in a separate pile, where successive wagons drive over it and pack it down. The cans and unburned organic matter should be raked to the sides of the mound, and burned with a little oil.

Waste Water.—The proper disposal of waste water is one of the most difficult problems in standing camp.

If the camp is provided with running water, beneath each faucet there should be placed a flat stone to arrest the drip. In some camps a pit about 1 foot deep and from 2 to 3 feet square is dug, to prevent the formation of mud puddles. Men are prone, however, to throw organic waste on these stones, and to thus favor fly breeding in these pits. If baths are provided, the waste water should be conducted off by trenches after passing through a grease trap.

Water used at the kitchens, for the washing of mess-kits and pans and for similar purposes, should be evaporated by the kitchen incinerators or carried away and emptied into a pit, where it will be decomposed by septic action.

Laundry should be done at a designated point downstream from where animals are watered, or when done in camp the water ordinarily should be led off through ditches, after passing through a grease trap. In dry climates it is best to scatter it in the sun.

Care of Troops on the March.—The surgeon with marching troops must first see that his own organization is prepared, that the men and animals are in fit condition and that they are properly equipped. He must be aware of the arrangements made by the Division Surgeon for the care and evacuation of the sick and wounded.

Before the march is begun, the surgeon should personally inspect the camp and see that latrines are covered, all manure and kitchen, as well as other, wastes, burned or buried, and the camp thoroughly policed. If any irregularities are found, they should immediately be reported to the regimental commander in order that they may be corrected before the command moves.

The surgeon should then return to his detachment and see that the

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portions of it leave promptly with the organizations to which they have been assigned.

Assignment of Personnel.—On the march, it is customary for the surgeon and his orderly to ride with the regimental staff, while one junior medical officer, with his orderly, a noncommissioned officer, and four privates, first class, or privates marches in the rear of each battalion. The sergeant, first class, and the remainder of the enlisted personnel, march in the rear of the regiment with the pack mule, and the ambulances if there be any. The ambulances rejoin the ambulance companies when combat is imminent.

It is believed that more can be accomplished if the surgeon, instead of riding at the head of the column with the staff, ride in the rear of the regiment, for here he can see what is transpiring, and be in a far better position to direct the sanitary service. Should the regimental commander desire to consult with him, he can readily be summoned by orderly. When ambulances are provided one sometimes marches in the rear of each battalion, but a better plan is to have them all march in the rear of the regiment. The ability to march is almost entirely a question of morale or "staying power." The continued presence of an ambulance, especially during a hard march, is undoubtedly destructive of morale, as it is a constant reminder to a man, who is weary and footsore, that if he fall out, transportation is available.

The wagon carrying the Camp Infirmary marches with the baggage section of the field train.

Care of the Sick and Wounded on the March.—A man falling out from sickness or injury is sent with a pass, showing his name and company, to the medical officer in the rear. The latter returns the pass, having indicated thereon the disposition that should be made of the man.

The medical officer should examine the man and render the necessary treatment, and, depending upon the nature of the patient's ailment, either require him to rejoin his company, or order him to await the arrival of the ambulance. Should there be no ambulance with the regiment, he is ordered to await the arrival of the sanitary train. In the latter case, the man is furnished with a diagnosis tag showing the orders given him.

No man should be allowed to ride in an ambulance unless he is physically unable to continue the march. Tired or aching feet are not a sufficient reason for riding. The easy-going medical officer will have his ambulance filled to overflowing, while he who is more strict will have but few men to transport.

Should a man be suffering from blistered feet, the latter should be treated, and the soldier required to, at least, attempt to resume the march.

Great judgment should be exercised in the selection of men sent to the rear, and patients whose disability promises to be of short duration, should be required to remain with the command. Recruits, especially, find the hardships and the restraints of active service irksome, and are prone to take advantage of every pretext to escape therefrom.

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Cases with slight ailments may be able to march, if relieved of their equipments.

More severe cases must be turned over to some other sanitary unit designated by higher authority.

Very severe and non-transportable cases are to be turned over to designated sanitary units or (rarely) left behind with the necessary medical department personnel to temporarily care for them.

Sanitation on the March.—The main sanitary duties of the surgeon, while on the march, are to see that the troops do not drink or fill their canteens with water from questionable or suspicious sources, and, when a halt is made near a village or town, that the men do not purchase edibles or liquids from insanitary stores, shops, etc.

Sources of water supply, stores, etc., should always be investigated by the surgeon before the men are permitted to utilize them and should they be found insanitary or considered suspicious, recommendations that guards be posted and the men kept away from such places should immediately be made to the regimental commander.

Men should be trained to be economical in the use of water, as the excessive drinking of it is usually a water habit. Under ordinary conditions a canteen of water should last one man a day's march, but frequently, if uncontrolled, men will empty their canteens during the first hour or two. A small amount should always be kept until an opportunity to refill the canteen presents itself.

One of the greatest hardships on the march, especially for infantry, is hot weather. Every precaution should be taken to prevent suffering from this cause. Men march in open order with sleeves rolled up and shirts open.

Halting places are selected, when practicable, where there is shade and free circulation of air. The men are cautioned against drinking too much water. Green leaves or a moist handkerchief in the hat afford relief from the sun. If the men are overheated, care should be taken to prevent them being chilled when they cool off.

As the command approaches the camping place, the regimental commander will send forward one or more officers, usually the supply officer and surgeon, to choose a camp site.

In Camps.—Upon arrival in camp each organization of the regiment is assigned its position. Equipments are removed, tents are erected and at the same time details from each organization build the fire places for the cooks, dig latrines, haul water and firewood, and perform what other duties may be required.

Assignment of Personnel on Arrival in Camp.—Upon arrival in camp, the surgeon will have certain other duties to perform and one of his assistants should be detailed to see that the detachment camp is erected; while another should see to the establishment of a picket line for the animals; and still another, to the erection of the Camp Infirmary, if there be one.

When the ambulance animals are unhitched, the lead bars should be placed under the end of the pole, and the harness hung over the latter.

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Care should be taken to keep the harness off the ground. In bad weather, it is advisable to put the harness inside the ambulance.

Care of the Sick and Wounded on Arrival in Camp.—Immediately upon arrival in camp, arrangements should be made for the treatment of blistered and abraded feet. If there is no other place available, the ambulance can be used for the purpose, the man sitting on the end of the seat, while the medical officer stands under it and uses the ambulance step as a dressing table.

If the regiment be operating independently, it will have its own hospital and will give hospital treatment to those who need it. If in a concentration or mobilization camp or with a division, the surgeon should arrange with the camp surgeon for an hour when the Camp Infirmary may be used by his command. Those needing hospital treatment are to be transferred to a field or other hospital which will be designated in orders.

A list of the inspections that must be made by the medical officer is the following:

What to inspect	What to look for
Daily	
1. Kitchens and kitchen incinerators	Are the kitchen and storeroom free from dirt? Fromflies? Are wastes properly disposed of? Is the food of good quality, sufficient and well prepared? Utensils clean?
2. Latrines	Are they free from flies (larvæ and adult)? Are the box-seats flyproof? Are they well cared for, burnt out, oiled, etc., depending on the method used?
3. Picket lines	Are they well policed? Is the manure properly disposed of?
4. Water supply	Is the water taken from any but the authorized place? Are the methods of purification being properly carried out? Is bathing, watering of animals, and laundry done at the proper place? Are the containers for purified water clean?
5. Disposal of refuse and waste	Is waste water from kitchens, baths, etc., properly disposed of? Are other wastes properly disposed of?
6. Quarters of the men	Are they clean and properly ventilated?
7. General police of the camp	Is the camp site clean? Are all pools drained or filled in? Are the collections of water covered with crude oil?
Semi-monthly	
Physical inspection of the men	Are the bodies and the clothes of the men clean? Is there evidence of lice? Is there evidence of venereal disease?

Arrival in Camp.—The surgeon's first duty on arrival in camp is to see that the water supply is properly guarded and that places are desig-

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nated for the procuring of drinking water, the watering of animals, bathing, washing of clothes, etc. Next he should see that the latrines are properly located, with reference to the tents of the men and the kitchens, and that they are of the proper depth—this depending upon the length of stay contemplated. Picket lines should be on the further side of the latrines and, if practicable 100 yards from the tents of the men.

Trench Sanitation.—Trenches are usually 1 to 2 meters wide, and sufficiently deep to allow the head of a man standing in them to be 1 to 2 feet below the surface. Connecting lateral trenches communicate with other trenches in the rear. Frequently these trenches pass dugouts, for shelter, sleeping, cooking and other purposes.

Many of these trenches, in the present war have been dug in land that has long been intensively cultivated, and, as a consequence, infections of wounds by the tetanus and gas-forming bacilli are very common.

In rainy weather, water collects in the trenches. Sometimes it is removed by means of pumps or a system of drains. When possible, the trenches are to be floored with wood, cement or other material. When the trenches are wet, the men should be furnished with rubber boots. If these are not obtainable men should grease the legs and feet with lard containing 5 to 10 per cent. salt, should wear waterproof boots, if obtainable, and puttees instead of leggings.

Many of the trenches are infested with flies, lice, rats, and other vermin. Difficulty has been experienced in the prevention of these pests, owing to the presence of unburied bodies in "no man's land," between the opposing forces. All that is possible in the way of prevention should be done, and proportionately greater efforts made to eradicate these pests, when once they have arisen.

Latrines are placed in covered recesses or dugouts, in the rear of the trenches and connected with them by a lateral trench. The excreta should be collected, removed from the trenches and burned or buried. This presents many difficulties, but is essential.

One method of collecting excrement in the trenches is the following: An empty oil can or tin box of any kind is cut transversely, in the middle on three sides. The two parts are then bent back on the uncut side until they form adjacent receptacles. A piece of paper is then placed in the bottom of one compartment. The man squats over the pan, urinates in the front compartment and defecates in the back. The pan is then carried to a collecting point, where the feces are emptied into one large collecting can, and the urine in another. The collecting pans are removed to the rear as frequently as is necessary and the contents incinerated. The paper in the bottom of the compartment for feces prevents the latter from becoming soiled, and the urine compartment can be rinsed with an antiseptic solution. Once daily these pans should be burned out. Or excrement may be passed into buckets provided with fly-proof covers. Such buckets may be extemporized from oil cans, etc.

All particles of food, as well as waste of other varieties, should be col-

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lected and stored in covered receptacles, and removed to the rear for incineration when the troops are relieved by others.

Orders forbidding the soiling of the trenches by human excreta, food particles, or any similar wastes, should be issued and rigidly enforced.

Combat.—In action, the duties of the medical officer are practically confined to those described in Pars. 642 to 650, M.M.D.

1. Rendering first aid to the wounded. Serious cases should be attended to first if possible, but no attempt should be made to do more than apply the first dressing, to stop excessive bleeding, to counteract shock, to apply supports to a broken limb and to relieve pain.

2. Directing the slightly wounded to go back on foot to some well-defined spot, such as a village or prominent feature in the landscape, which should already have been noted in orders as the collecting point for such cases.

3. Removing cases not able to go back by themselves to the nearest and most suitable cover, *e.g.*, a shell crater, or to a point where an aid station is established.

For a discussion of certain elements of this work, see the chapter on "Evacuation of Wounded."

The Regimental Surgeon should distribute his quota of commissioned and enlisted personnel in the proportion of one officer to each battalion and two men to each company. Their duty is to accompany the command and apply first-aid dressings to the injured while the action continues, and not attempt any recovery of the wounded until a lull occurs. A litter squad is a conspicuous object and in open fighting gives the enemy the range. In this war it is shot down by the enemy. The regimental aid station is established at a protected point as soon as the wounded can be brought to it, or can reach it by their own efforts. As soon as its site is selected, depending upon the terrain, route for removal, development of the engagement, etc., it will be necessary to deplete the quota of sanitary personnel with the firing line by one officer and a few men. These should be drawn as far as possible from that part of the line which has suffered least.

Assignment of Personnel.—When the regiment goes into combat, the sanitary personnel accompanies it. Those assigned to battalions should remain with them, while the surgeon, the sergeant, first class, and the remainder of the enlisted personnel, establish the aid station. In the British service the Regimental Surgeon remains in close touch with the commanding officer when the troops go "over the top."

The Aid Station.—With dismounted troops, the aid station (one per regiment or smaller independent unit), will be established as the engagement develops and the number of wounded warrant it, if it is probable that the command will remain, for a short period at least, near the proposed location of the station. Par. 645, M.M.D.

With a mounted command the sanitary detachment accompanies the troops during the whole course of the engagement, pausing only so long as is necessary to render first aid and to collect the wounded at some place

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where they can be turned over to an inhabitant of the country to be cared for.

The location of the aid station will depend entirely upon local conditions. It should be as near the firing line as possible; be sheltered from the enemy's fire as much as possible; and have a convenient avenue for evacuation. The station should be shielded from direct rifle fire. Any building or location which offers a good target for artillery fire is worse than no shelter at all, and the nearer the station is to the front the safer it will be from dropping overshot projectiles.

The material for the aid station is brought up on the pack mule.

First Aid.—The personnel accompanying the battalion, is to keep in touch with the firing line, tending the wounded as well as possible, and transporting the more severe cases to the aid station if practicable.

If the wounded cannot reach the aid station, advantages should be taken of trenches, ravines, shell craters, and other inequalities of the ground affording temporary shelter. During intervals in the firing or at night, they may be transported to the aid station.

The aid station will be little more than a place for assembling the wounded, as its personnel must be prepared at all times to close the station and move with the regiment. The treatment to be given here consists mainly in the readjustment or replacement of bandages and dressings; immobilizations of fractures; administrations of restoratives and narcotics; and rarely the performance of such emergency operations as the ligation of vessels, tracheotomy, etc.

Diagnosis tags are to be attached to all dead and wounded and the duplicates disposed of as heretofore described.

If conditions permit, slightly wounded may be directed to the station for slightly wounded, the location of which will have been previously made known to the surgeon.

In trench warfare unusual difficulties are present, and the situation presented does not conform to that usually considered.

Regimental aid stations must necessarily be formed within the zone of fire; it is therefore essential to prevent the formation of a crowd, as any group of persons would almost certainly attract artillery fire and thus lead to more casualties. The wounded should therefore not be closely grouped together, but spread out, preferably parallel to the firing line. Every advantage should be taken of cover, natural or artificial with a view to screening the position from the enemy. As little material as possible should be opened up so that the position can be rapidly changed if necessary.

The regimental medical officer acquaints himself with the regimental orders and then makes his own arrangements accordingly. It is worse than useless for him to await detailed or contingent orders from an administrative medical officer who cannot possibly be thoroughly acquainted with local conditions. At the beginning of the Russo-Japanese War the Russian medical officers were much handicapped by waiting for orders which were frequently inapplicable when received.

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Only absolutely necessary surgical work should be attempted, *e.g.*, control of hemorrhage, the readjustment of splints and bandages when these have become so loose or displaced that the man cannot safely be sent further to the rear without attention. Morphine and stimulants may be administered. The all important duty of the Regimental Surgeon in charge of the aid station, is to expedite the evacuation of the wounded to the rear by rendering them able to proceed unattended or preparing them for transportation. The Ambulance Companies evacuate the regimental aid stations. The efforts of the regimental sanitary service may be supplemented by the band or after the engagement is over by men detailed temporarily for that purpose from the line.

Open warfare and an increased depth of the zone of fire, make the work of litter bearers more arduous than it has been heretofore. The distances over which they now have to work are great, and the risks of their getting hit are augmented. The guiding principle now in trench warfare, is to remove the wounded man during an attack if he falls between the trenches or from the trench itself, if he has been wounded in it. Often it is necessary, in the former case, to leave a wounded man where he lies, until nightfall, when the systematic removal of all wounded left on the firing line or collected under cover, may take place. If the regiment has been supplied with first-aid packets and carefully instructed in their use, first aid is often rendered a man by a comrade or in some cases he can dress his wound himself. The necessity of instructing the officers and soldiers in first aid becomes apparent. Conditions of warfare now are such that the prompt rendition of first aid by the enlisted men of the Medical Department to all men hit is impossible. In the present war, wounded may be recovered under darkness. If the enemy has been dislodged and repulsed, the electric pocket lamp may be used, or inexpensive acetylene lamps of simple, yet strong and portable, material, but the use of any illuminant will draw hostile fire if the enemy is within range.

Pistols for illuminating purposes have been used under favorable circumstances. Each of these throw bullets which on striking develop a powerful white or red light that lasts eight or ten seconds and lights up objects within a radius of 600 feet. They are especially useful in broken country, where the searchlight is ineffective, but can be employed, like other illuminants, only when the enemy has fully abandoned the field. Otherwise the light will inevitably draw hostile fire.

Red Cross dogs for the recovery of wounded have proven of great value in the present war. Several of these animals should be attached to each regiment.

MISCELLANEOUS DUTIES OF MEDICAL OFFICERS

There are some duties devolving upon medical officers which cannot properly be considered under either of the subjects heretofore discussed.

Courts-Martial.—A medical officer may be appointed summary court, or he may be a member of either a special or a general court-martial. In

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such an event, the officer should procure a copy of the Manual for Courts-Martial, and acquaint himself with the duties required of him.

Boards.—Medical officers may be made members of boards appointed for any purpose. See chapter on the "Sanitary Service of Posts."

Physical Examinations.—The medical officer is called upon to make all of the required physical examinations of officers and enlisted men. Usually a form, 613 or 135, will be furnished in each instance showing the kind of examination required, and after making the latter, the findings should be carefully recorded. Pars. 382 to 390, M.M.D.

In the examination of applicants for some positions, such as service in the aviation section of the Signal Corps, certain special examinations are prescribed, but these are indicated on the blank, and record of them should, therefore, present no difficulty, though they require special apparatus.

Of Deserters.—An enlisted man who has been apprehended or has surrendered as a deserter, and whose trial is not barred by the statute of limitations, will be sent by the regimental commander to a medical officer for physical examination. After making a thorough examination, the medical officer should send a certificate to the regimental commander, stating that he has made the required examination, and either finds the man fit for service or otherwise. In the latter event, the nature of the disqualification should be stated.

Of Enlisted Men Discharged on Account of Disability.—When an enlisted man is permanently unfitted for military service because of wounds or disease, he should, if practicable, be discharged on certificate of disability before the expiration of the term of service in which the disability was incurred. Par. 159, A.R.

The man's organization commander will make out the first part of the certificate, Form No. 17, A.G.O. (one copy), and then forward it to the surgeon, who will make a thorough physical examination, and accomplish the second part of the report, especial care being taken to state the degree of disability, to describe particularly the disability, wound, or disease, the extent to which it deprives the soldier of the use of any limb or faculty, or affects his strength, activity, constitution, or capacity to labor. If such disability was incurred in line of duty, and the soldier declined treatment for the relief of such disability where treatment was directed, that fact will be set forth in the certificate.

Every effort should be made to harmonize the surgeon's statements with those of the commander, especially as to whether the disability was incurred in line of duty or not.

The completed report should be sent to the regimental commander.

Recruiting.—One of the regimental medical officers will be detailed by the regimental commander as "Recruiting Officer." It will be the duty of the latter to examine and enlist all applicants for enlistments, who show a letter or note from the adjutant authorizing their enlistment. The physical requirements of candidates are discussed in detail in G.O. 66, W.D., 1910. The blank forms employed are found elsewhere in this book.

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EXPLANATION OF ABBREVIATIONS USED IN THE TEXT OF THIS CHAPTER

A.G.....The Adjutant General of the Army.
A.G.O.....Office of the Adjutant General of the Army.
A.R.....Army Regulations.
A.W.....Article of War.
Comp. G.O., W.D....Compilation of General Orders, Circulars and Bulletins.
C. of O.....The Chief of Ordnance.
D.S.....Department Surgeon.
F.S.R.....Field Service Regulations.
G.O.....General Order.
I.G.D.....Inspector General's Department.
M.C.M.....Manual for Courts-Martial.
M.D.....Medical Department.
M.M.D.....Manual for the Medical Department.
O.D.....Ordnance Department.
Q.M.....Quartermaster.
Q.M.C.....Quartermaster Corps.
Q.M.G.....Quartermaster General.
S.G.....Surgeon General.
U.R.....Uniform Regulations.
V.S.....Vital Statistics.

It has not been possible to give the source of each item of information in the foregoing chapter. Where data have been obtained from private publications, it is hoped that their authors will accept, as appreciative acknowledgment the listing of their works in the following bibliography:

Compilation of General Orders, Circulars and Bulletins, War Department, 1881–1915.
"Drill Regulations and Service Manual for Sanitary Troops," 1914.
"Elements of Military Hygiene," Ashburn.
"Field Service Regulations, United States Army," 1914.
"Manual for Army Cooks," 1916.
"Manual for Courts-Martial, United States Army," 1917.
"Manual for the Medical Department," 1916.
"Medical Service in Campaign," Straub.
"Military Hygiene," Havard.
"Preventive Medicine and Hygiene," Rosenau.
"Tables of Organization, United States Army," 1917.
"Uniform Regulations, United States Army."
"United States Army Regulations," 1913, (corrected edition) Apr. 15, 1917.

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CHAPTER IV

THE AMBULANCE COMPANY

The organization, equipment, functions and employment of Ambulance Companies are discussed in the Manual for the Medical Department and in Straub's work on "Medical Service in Campaign."

The Director of Ambulance Companies is charged with the collection prior to a battle of all the transportation available from both civil and military sources. These vehicles, employees, etc., he congregates at designated points, assigns them to duty with companies, and causes them to work so far as possible in conjunction therewith. In order to superintend this work, he should have available in addition to one private, first class, as orderly, a detachment of five men, of whom at least one should be a sergeant and the remainder corporals and privates, first class. The value of a noncommissioned officer's service in the management of teamsters and others is appreciably greater than that of subordinate personnel. The members of this detail should be vested with adequate authority over unofficial civilians who are utilized for such service. The collection of transportation should be facilitated by the issuance of adequate orders from the commanding officer to line and medical officers that they collect all transportation which is within their control.

The following information concerning ambulance companies was formulated almost in its entirety by Major C. C. McCornack, M.C., when in command of Ambulance Company No. 1, after several years' experience in that capacity.

The command of an ambulance company is comparable to that of a company of the line, as the principal duties, except after an engagement, consist in the handling and training of from 119 to 150 men and 94 animals. The duty simulates that of a battery of artillery more closely than that of any other unit.

Valuable details in the administration of an ambulance company may be gained by observing methods followed by company officers of the line. In exercising discipline, Par. 2, A.R., which prescribes that military discipline should be exercised with firmness, kindness and justice, should be obeyed. Any tendency toward partiality must not be shown as it will create discontent and injure discipline. Threats should not be made unless they are carried out. Punishment should follow offenses quickly lest its value be lost. Individual dispositions of the men should be studied. Each one is different from the others and can be handled to best advantage in an individual manner. Punishment should be awarded in sufficient

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severity only to prevent a recurrence of the offense by the same man or its repetition by others.

A company commander should feel and display a personal interest in the welfare of each member of his command. This should be shown in such a way that, while not prying into his personal affairs in any manner, should give him an opportunity to seek and receive assistance in the many more or less difficult personal problems he may have. Good work, proficiency and activity should be rewarded as well as punishment given for failure. The man should not be tried when the needs of justice can be accomplished by awarding company punishment. Extra fatigue, particularly sawing wood and other disagreeable work, confinement to camp and other forms of company punishment are often just as efficacious as trials which tend toward lowering of the self-respect of the individual.

A successful mess is perhaps the most important part in the administration of the company. Good competent cooks, and an honest and energetic mess sergeant must be provided but these alone are not sufficient. All the affairs of the mess must be given a daily personal supervision by the company commander. The best of men, unless constantly supervised and held to their work tend to deteriorate and carry the affairs of the mess into a rut. It has been found that the mess account form, No. 74 M.D., carefully followed, permits a more careful supervision of the finances of the mess and more equitable distribution of the finances and food supplies throughout the month than other systems occasionally in use. The Manual for Army Cooks should be consulted. The mess must be sufficient in quantity to satisfy the cravings of men who seem to be abnormally hungry at all times. Quality must be such that there can be no cause for complaint. Variety must be introduced from day to day. It has been found that if certain articles are cooked on certain days that these days become known as "Bean Day," etc., and the food is not relished so well as if the days for special articles are varied from week to week. Cleanliness and other sanitary measures need not be mentioned here. Amusements are requisite. A greater amount of work can be done and better results accomplished if there is sufficient time allowed each day and an opportunity afforded for various forms of recreation and amusement. Men will work hard and for long hours day after day when the occasion demands but opportunity for relaxation should be given whenever practicable.

The personnel of the ambulance company should be regularly assigned to various duties in the ordinary routine of the company. Each horse should be permanently assigned to the man who is to ride it and he, except in the case of sergeants, first class, should be required to groom and care for this animal and give it all needed attention. In the mule company the teams, harness and vehicles should be permanently assigned to the several drivers who will be responsible for their care. They will become fond of the animals, thus keeping them in better condition and themselves in more content. Men should be kept on these assignments at least sufficiently long enough for them to become thoroughly proficient in their duties when,

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if desired, changes may be made. It is believed, however, if the drivers remain with their teams at all times and other men are trained by working with them that better results can be accomplished. The ordinary detachments in the ambulance company are the "Ambulance Detachment," "Pack Train Detachment," "Wagon Detachment," and "Bearer Detachment." Horse shoers, saddlers, farriers and mechanics, are very essential members of the company. Men suitably trained in these duties should be enlisted or developed. With motor companies, if one man is assigned to each car he will take pride in the upkeep of that car. On practice marches those men whose duties require them to ride should be allowed to do so. The duties of the bearer detachment in active service consist of walking long distances and carrying heavy loads. If they are permitted to ride in the ambulances every time the company goes out they are not being developed along the lines of their work. A company starting on the march should not make more than 12 or 15 miles per day, for the first three or four days; after this the distance may be greatly increased as the men and animals become hardened, and 20 to 25 miles should be considered a normal day's march.

Such standing orders as the following may be published when in garrison and appropriately modified when in the field:

1. The following standing orders are in force from this date. All men are responsible for a knowledge of their contents and of anything that may be posted on the bulletin board from time to time.

2. **The First Sergeant** is appointed by the company commander. He has general charge of all matters pertaining to the company and will supervise the administration of the company to secure the greatest possible efficiency. He is especially charged with the proper preparation of all correspondence, records and reports, the maintenance of discipline and police, and such other duties as are usually performed by First Sergeants of companies throughout the army. He is responsible for cleanliness of the company premises. He will arrange details as required.

3. **The Supply Sergeant** will have charge of and be responsible for all public and other property pertaining to the organization and will take general supervision over stables, all transportation, saddler and blacksmith shops. He will see that all property required is on hand and in good condition. He will prepare all property papers, and will each Friday inspect all harness and wheel transportation with regard to completeness and condition. He will be present at all inspections of stables and transportation, and will check and care for personal and public property of men absent from the company. He will obtain receipts for all property not in his personal charge in the storerooms and allow no one to have access to storerooms except under his supervision.

4. **The Mess Sergeant** is in direct charge of the kitchen and dining room and all persons and property therein. He will see that scrupulous cleanliness is observed. He will procure all supplies, be responsible for their care, and supervise their issues and preparation, keep an accurate

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account of daily expenditures and receipts, and submit voucher expenditures to the mess officer. He will submit a daily bill of fare to the mess officer for approval before preparation of meals. He will be present at and supervise the serving of each meal, and maintain order in the dining room.

5. **The Noncommissioned Officer in Charge of Stables** and picket lines is directly responsible for the care and condition of all animals and property pertaining thereto, the discipline of all men detailed about the stables, and the police of stables, corrals, stable quarters, picket lines and adjacent grounds. He is in charge of the wagon detachment and will see that wagons are cared for, in serviceable condition, and fully equipped at all times. He will draw, care for, and issue forage, keep the record of forage drawn and issued, and make a morning report of animals and forage. He will report to the company commander any case of sickness or injury and make immediate report of any cases of serious sickness, injury or abuse of animals. He will see that orders as to stable management are carried out and will report any violations of same by any person. He is charged with procuring transportation and subsistence for men transferred.

6. **The Noncommissioned Officer in Charge of Quarters** will be detailed for twenty-four hours and will report to commanding officer, field sanitary troops or senior officer present in his office at 10:45 A.M. Upon going on duty and upon being relieved he will present a written report of tour in the book provided for that purpose. He is in direct charge of the good order and discipline of the barracks during his tour of duty, will not leave barracks except on duty and will report at once by phone or messenger to the commanding officer, field sanitary troops or the proper company commander, any occurrence of importance. He will call the roll of the company at reveille and retreat reporting the result to the Officer of the Day and the names of all absentees and those late or in improper uniform to the commanding officer of company concerned. He will take sick book and men on sick report to sick call and see that men attend sick call in proper uniform. He will receipt daily for keys and guns in rack, will carry the keys on his person; keep the rack locked and the number of guns verified, allow none to be taken from the rack without proper authority, and require that all guns so taken out are returned as soon as the necessity for their use is over. He will see that all calls are blown on time, verify the presence at specified times of men restricted to quarters, allow no intoxicating liquors in the barracks, answer the telephone, and see that the telephone is not used for long conversations. He will see that cans for drinking water are filled daily and in proper place and that only authorized lights are burned. He will see that pool-room attendant is on duty in pool room at required hours. He will allow no collectors, solicitors or women on the premises except by special permission in each case. He will use every endeavor to keep building in a clean and sanitary condition, reporting to the proper officer for disciplinary action names of men who spit or throw papers, cigarette butts, trash, etc, on the floor. He will have hallways, stairs, and front porch and steps swept by pool-room attendant at 11:00 A.M. each day. Piano will

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not be played between 1:00 and 4:00 P.M. He will allow no dogs in barracks except those especially authorized and none in dining room, kitchen, or offices at any time. He will wind the clocks each Sunday and determine the accuracy of clocks daily. He will be in the dining room at meal hours and prevent boisterous and disorderly conduct.

7. **Squad Leaders.**—The company is divided into detachments and platoons, each constituting a squad under a noncommissioned officer who is responsible for the soldierly appearance, conduct and military efficiency of his squad and the serviceability of all equipments and transportation pertaining to it. He will keep himself informed as to all matters pertaining to his squad as individuals and soldiers and by timely instructions and corrections endeavor to raise their military and personal standards. He will check and turn over to the Supply Sergeant the property of any man absent from the company. After each muster squad leaders will check all clothing in possession of men of their squads on individual clothing slips and report the result to the First Sergeant. Squad leaders will be held responsible for the cleanliness of their departments and completeness of fire apparatus therein. Unless otherwise detailed they will be present at all inspections of their squads including that of harness and transportation.

8. **The Company.**—All members of the company will be present at all formations in proper uniform unless regularly excused. Applications for passes will be made by 11:00 A.M. Passes extending over drill or instruction periods, inspections, or on afternoons preceding inspections between 1:00 and 4:15 P.M., will not be granted except under exceptional circumstances which must be stated at time application for pass is made. Men desiring to speak to the company commander may do so between first and second drills by permission of the First Sergeant. Beds will be promptly made up and policed before breakfast, equipment will be arranged at the head of the bed in the authorized manner; trunk lockers neatly packed, wall lockers clean and kept in orderly manner; dirty clothing in barrack bag; shoes clean at all times and in order beneath the lower left side of bed. Private trunks or boxes will not be kept in squad rooms but may be kept in company storerooms. Beds will be arranged for inspection as directed. All beds will be cleaned each week and all bedding aired for at least two hours on Friday. Barracks will be thoroughly policed by designated squads before the first assembly for drill or stables, and all windows will be cleaned, floors scrubbed, and barracks thoroughly policed on afternoons preceding inspections. Men will pay the utmost attention to personal cleanliness. Hair must be kept short, faces and necks shaved, and underwear frequently changed, etc. No intoxicating liquors will be permitted in the barracks. Lights will be burned only as needed.

9. **Every man** is responsible for the amount of clothing issued to him and no clothing will be exchanged until it has been condemned by the First Sergeant. When men join the company, their clothing and equipment will be checked by the Supply Sergeant.

Losing or selling clothing is punishable under the Articles of War.

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All clothing will be marked with the company number and the name of the owner in indelible or India ink.

10. **Uniform.**—Men will at all times appear in proper uniform and preserve a neat and soldierly appearance. All buttons and hooks will be fastened throughout; collars and shoes clean. Lounging on front barrack porch in improper uniform without leggins, shirts, etc., is forbidden. The following uniforms are prescribed for Post wear: olive drab woolen with caps. Hats and winter caps will be worn only when specially authorized. On pass olive drab woolen and caps may be worn. White collars will be worn with olive drab uniform when on pass or on street cars and with dress uniforms at all times. Blanket-lined overcoats will not be worn on pass. Olive drab gloves only may be worn on dismounted pass. Fatigue and stable: fatigue uniform complete with caps. Retreat: dress uniform. Drills: as ordered. Olive drab shirts without blouses will not be worn about the Post unless specially authorized.

11. **Fire Orders.**—Fire apparatus will be kept in proper racks and not used for any other purpose. Buckets will be kept filled at all times and will be refilled every Friday. At Fire Call all the men will assemble at once in front of barracks with fire buckets and axes and proceed to the location of the fire at double-time under the senior noncommissioned officer present. On arrival the company will be reported to the fire marshall or Officer of the Day at once. Upon being relieved from duty at a fire or fire call, the roll will be called and report of same sent to Post Headquarters with next morning report. In case of sudden danger, excitement or alarm from any cause at any time the company will be taken as is considered advisable by the senior officer or noncommissioned officer present.

12. **Stable Orders.**—The stable sergeant is in charge and acts under direct orders of the company commander. No smoking is allowed. Stable corrals and adjoining ground will be policed daily. No animals will be taken from the stable without permission of the stable sergeant or higher authority. Men on mounted pass will report to the stable sergeant on leaving and on return. Animals and equipment will not be used by others than to whom assigned without permission from company commander. No animals will be tied by bridle reins. Heated animals will not be fed oats or watered until cool. Mounts for guard will ordinarily be taken from the team assigned to the soldier but otherwise will be designated by stable sergeant. They will be placed in stalls assigned to guard and will be groomed and watered by the soldier riding same and so far as is consistent with guard orders will be fed twice during tour, kept under shelter, unsaddled whenever possible, and cinch loosened when not in use. All animals will be treated with kindness and gentleness at all times. Striking, jerking, and other forms of abuse are prohibited. Saddles, harness and equipment will be cleaned after use, so as to be in a presentable condition and thoroughly cleaned on Fridays. Collars will be kept clean, smooth and soft at all times. All men are cautioned to observe strictly these orders and any other verbal or published orders that may be given from time to time as to care of animals.

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13. When in garrison, each man will have in his possession and be responsible for the following articles of uniform and equipment:

Belt, waist	1	Socks	6 pairs
Blankets, O.D	2	Knife	1
Breeches, O.D	2	Fork	1
Cap, dress, with band	1	Spoon	1
Cap, O.D	1	Pouch for diagnosis tags and instruments	1
Coats, fatigue	1	Shelter tent half	1
Coats, dress	1	Pole, jointed	1
Coats, O.D	1	Pins, shelter tent	5
Cord, breast	1	Cup	1
Cord, hat	1	Mattress covers	2
Collars	6	Sheets	4
Drawers	6	Pillow cases	2
Gloves, white	3 pairs	Mattresses, cotton	1
Hats, service	1	Pillows, cotton	1
Leggins	2 pairs	Bunk tag	1
Shirts, O.D	2	Locker, trunk	1
Shoes, marching	3	Tag, identification	1
Drawers	1	Trousers, fatigue	1
Undershirts	1	Belt, web, enlisted men Medical Department	1
Shoestrings	2 pairs	Handbook, mason	1
Socks, wool	2 pairs	Axe, hand, infantry	1
Shoes, marching	1 pair	Bags, ration, cavalry, pairs	1
Shirt	1	Canteens	1
Breeches, O.D. wool or O.D. cotton	1	Canteen cover, dismounted	1
Trousers, dress	1	Meat can	1
Undershirts	6		

For statement of clothing to be taken to port of embarkation see the chapter on The Regimental Surgeon.

14. After each muster (last day of the month) chiefs of squads will verify all articles of clothing and equipment in possession of the men of their squads and compare it with the individual clothing and equipment cards. Discrepancies will be reported to the First Sergeant. Additional checking will be made as needed.

The following program of instruction was followed by Ambulance Company No. 1 in compliance with Par. 9, G.O. 17, W.D., 1913, for the period from April 1, 1916, to March 31, 1917:

A. Field Training.
I. Practical.

April 1 to 30, 1916

1. Application of first aid in the field.
2. Loading and transportation of patients by ambulances.
3. Tent drills.
4. Marches with full equipment and establishing camp, cooking one meal (one day per week).
5. Establishment of stations for combat.

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May 1 to 31, 1916

1. Improvisation of litters and travois.
2. Loading and transporting patients by travois and on mules and horses.
3. Marches with full equipment, camping over night (two to four times per period).
4. Operation of stations in combat.

June 1 to 30, 1916

1. Application of previous work.
2. Practice marches with full equipment (three days duration twice per month).
3. Solution of minor problems.

July 1 to 31, 1916

1. Joint drills with Field Hospital No. 1 in minor problems, handling patients as in combat.
2. Practice marches and camping with daily problems as much as practicable.

Aug. 1 to 31, Sept. 1 to 30, Oct. 1 to 31.—Continuation and amplification of above. Probable maneuver camps.

Throughout period: Sufficient drills mounted and dismounted each month to prevent deterioration. Weekly inspections in full field equipment, mounted and dismounted.

II. Theoretical.

B. Garrison Training.

I. Practical.

Nov. 1 to 30

Daily instruction.

1. Drill in harnessing and driving.
2. Drill of ambulance detachments by platoons.
3. Drill in packing and pack detachmert.

One day or more per week.

1. Close order by squads and platoons.
2. Litter drill by squads and platoons.
3. Tent drill by squads.
4. Instruction in first aid.

Dec. 1 to 31

Daily instruction.

1. Drill of ambulance detachment.
2. Drill in packing by pack detachment.

One day or more per week.

1. Company close order drill.
2. Handling patients and loaded litter.
3. Tent drills.
4. Instruction in first aid.

January, February, March.—As modified by weather conditions.

As above; paying particular attention to work leading up to field instruction.

Above will require modification when recruits are received.

II. Theoretical, through entire period.

1. Officers' school.
   1. Drill Regulations, sanitary troops.
   2. Army Organization and Administration, especially Medical Department, M.M.D., F.S.R. Tables of Organizations and Equipment Orders.

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3. Duties of field sanitary troops in field.
4. Map reading and making.
5. Problems in sanitary tactics.
6. Progress in Medical Subjects.

2. Noncommissioned officers' school.
   1. Army Organization, especially Medical Department.
   2. Field Sanitary Troops on March and Train.
   3. Duties of Field Sanitary Troops in Field.
   4. Drill Regulations, Sanitary Troops.
   5. Clerical work.
   6. Map reading and making, elementary.
   7. Field Engineering for Sanitary Troops.
   8. First Aid, Surgical and Medical.
   9. Minor Surgery.
   10. Operating Room Technique.
   11. Materia Medica, Therapeutics and Dispensary Work.
   12. Nursing and Ward Management.
   13. Minor problems in Field Service.
3. Privates, first class, and privates.
   A. School of Instruction for Ambulance Companies as per M.M.D.
   B. Lectures on general subjects and on personal, garrison, field and tropical hygiene, also Functions of Field Sanitary Troops in the Field.
   C. Class in signalling for special men.

MOTOR TRANSPORTATION

Motor Ambulances.—Motor ambulances in our army are still in a more or less experimental stage. Their advantages and limitations have not been entirely worked out, hence the question as to the ratio of mule to motor companies in an organized division is still a matter of opinion. Part of the enthusiasm for motor ambulances is due to their ease of operation on city streets, the difficulty of their operation in war not being given due consideration. The advantages of motor ambulances are their rapidity of motion, the distances which they can cover, and economy of operation. Among the disadvantages are the difficulty of their use over other than good roads, their inability to follow an infantry column at the rate of 2½ to 3 miles an hour, to follow cavalry or mountain artillery across country, to ford moderately deep streams or negotiate other difficult country. For evacuation ambulance companies, it would seem that motors would be of great advantage and here it is believed that they will always be extremely useful.

Organizations equipped with motor transportation must exert every effort to constantly maintain these vehicles in perfect condition in order that maximum efficiency may be obtained from them in use, and serious loss prevented through deterioration. It is only by constant attention to minor details and exercise of the same sympathy with the machines that is given to animals that the essential minor adjustments can be made and extensive repairs prevented. There are several different types of motor-driven vehicles used by the Medical Department, but the essential principles of construction are common to all. Careful attention should be given the instruction books issued by each maker and the machines given the attention

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directed therein. The service and life of this transportation depends upon the constant daily application of a comparatively few important measures thoroughly learned and made habitual.

Cleaning.—Ambulances, trucks or automobiles must be carefully and correctly cleaned at regular intervals. Water may be used on the body and certain parts of the cars but should never be used on the mechanical parts. Water used about the motor will in a short time find its way into the wiring system, etc., and short-circuits will result. Gasoline will dissolve grease and oil but at the same time is expensive and will leave a dry, unoiled surface in many places which should have some lubrication. Therefore, the best and only method of cleaning should be by the use of waste with an occasional cleaning with kerosene. To clean in this manner requires more time, effort and attention but should be insisted upon without exception. It is not sufficient to wipe off the engine and polish the carburetor, water jackets, etc., but the wire connections and grease cup should be freed from accumulated dirt. Leather boots covering joints, brake rods and brake bands, universals, and every minute point where dirt gathers must be carefully cleaned if positive results are expected. The body may be cleaned with water, but when used the whole surface should be neatly and thoroughly dried and free from smears.

Lubrication.—A general principle to be ever kept in mind is that thorough and accurate lubrication with a carefully selected lubricant gives successful operation. Grease cups should be systematically filled and at frequent designated intervals given a half turn to force the grease into the connections. The crank case and transmission should have a proper quantity of oil. The oil for the cylinders should be strained and the reservoir kept filled. The pump feeding the main bearings and the camshaft should be carefully oiled. The wheel bearings must be kept well lubricated. The differential will be filled to the level of the indicated point, but care must be taken not to exceed this level as the brake bands will become oily and when the emergency brake is applied the brake will slip.

Renewing Oil.—Oil after a time loses its viscosity and becomes ineffective as a reducer of friction. When this occurs the oil should be drained off, the case cleaned carefully and fresh oil supplied. The frequency of this renewal depends upon the type of machine, grade of oil, weather, etc. It should be remembered that new oil is less expensive than machine repair work and it is better to renew too often than at too great intervals.

Cooling System.—The water used should be free from fine particles, with as small amount of alkali as circumstances permit and strained when poured into the radiator. Hose connections must not leak, pet cocks must be closed, though easily opened if need be and when engine is started, water pump, (if this system is used) must be working, so that engine does not overheat. Fan should be tight and no oil in it to cause slipping. If there is any danger of freezing whatsoever it should be a routine practice to drain radiators at night to prevent freezing. The engine should be run a few minutes after draining had apparently ceased in order that all water is out

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of the system. If water is scarce drain into bucket for use in the morning. Cups to radiators should be loosened at time of draining, otherwise they will be very difficult to remove in the morning. Auto freezing mixtures are useful but are too expensive for general use, and with the exception of alcohol have a tendency to corrode the metal of the radiator as well as to clog by precipitation.

Driving.—A complete understanding of the peculiarities of the gear shift is requisite before making any attempt to drive. The first lesson to be mastered is the quiet, quick, and easy way of shifting gears. Always start on first speed and shift to a higher speed as the car gathers momentum. The ability to shift from a higher to a lower gear without losing speed is a fine example of driving skill but with practice the gear shift levers may be slipped easily and smoothly into mesh. Practice constantly until the movement becomes automatic. Low gears give power but heat up the engine and use up gasoline. Higher gears give the minimum power but the maximum of mechanical smoothness. Having learned the method of starting and shifting gears the real art of driving must be accomplished. No man ever makes a trustworthy driver who permits his attention to be diverted. Accidents are usually caused by negligence. The car should always be under the proper control of the driver and he should be ever watchful of the road as to inequalities of surface, width, character of soil, approaching or crossing traffic, etc. A moderate rate of speed steadily maintained will far exceed in mileage and economy of gas consumption spurts of speed with frequent slowing and stopping. High rates of speed are dangerous and detrimental to the machine. Ambulances and trucks should not exceed 15 miles per hour except for very short distances. When roads are poor this must be much less. A distance of 12 yards should be maintained between machines in column in fair and good roads; with tortuous or bad roads this may be increased to 30 yards.

Laws and Courtesies of the Road.—Every driver should be versed in the road and traffic rules and should follow them implicitly whether under surveillance or not. The courtesies of the road are the laws regulating traffic plus the consideration which each driver would himself like to receive under similar conditions. When the car stops for a few minutes' wait, the engine should be silenced. This may entail the extra exertion of recranking but in the course of a day's work saves much oil and gasoline.

Carburetor.—Ordinarily the carburetor is adjusted to give a balanced mixture under usual conditions of weather and altitude. Marked change from the normal requires adjustment, but this should not be done until the correct method of adjusting is perfectly understood. Better a poor mixture than to attempt readjustment without knowledge. One of the greatest sources of carburetor trouble is too much tinkering.

Cleaning the Carburetor.—At certain times carburetors which are not giving good results need to be cleaned instead of readjusting. This should be done by removing float, draining and testing the intake and vaporizing chambers to see that same are free from obstructing particles of sand, wood,

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etc. Ignition and lighting wire connections should be kept cleaned, tight, and out of contact with hot rubbing portions of the other parts.

The Magneto.—Should be cleaned, properly covered, and given a few drops of oil about every 1000 miles (oftener if necessary) and cleaning, scraping, and separation of the points effected so that a fat, hot spark leaps between the poles when the motor is started.

Lighting System.—Extra lamps should be kept on hand to replace these burned out or broken. Reflectors should be cleaned by blowing the dust away. When absolutely necessary to wipe, a soft woolen rag should be used with care to prevent scratchnig. Storage batteries should be kept clean on the outside and terminals smeared with a thin layer of vaseline to prevent corroding. Distilled water in the batteries must be kept to the proper level. Batteries must be kept charged. Batteries maintained at full amperage strength do not depreciate as do those that are allowed to run down. Examine frequently to see that terminals are never short-circuited. This kills the battery quickly.

Starting System.—Hand starting, the shift lever should be in neutral, emergency brake on, the spark retarded, to prevent kicking back, the throttle open sufficiently to give a quantity of gasoline vapor adequate to run but not to race the engine. The crank should be turned over and a smart snap given it in order to whirl the motor.

Electric Starting.—Electric starting is simply the turning over of the motor by electric power instead of by hand power. The same rules governing electric wiring elsewhere are applicable here. The spark may be advanced but other proceedings are the same as in hand starting.

Care of Motor.—One of the dangers against which drivers must guard, is straining the motor. Often attempts are made to drive through heavy sands or up steep hills or inclines on high speed on gear necessitating the shifting of gears at some critical moment. Gauge the power required if possible in advance and by shifting to a lower gear maintain a steady drive without any strain of the machine. Knocking is often a sign of overstraining but more frequently indicates carbonized cylinders. When the engine knocks examine cylinders at the first opportunity to discover whether they are carbonized. Overheating is prevented by perfect cooling system, and by estimate of gear to be worked.

Tires.—Keep rim bolts tight. Pneumatic tires must be kept inflated to full pressure required for each type. This can only be done by constant watchfulness and frequent testing with pressure gauge. Repair inner tubes and casings promptly.

Wheel Bearings.—Carefully adjust wheel bearings and see that they are properly oiled.

Springs.—Occasionally jack springs and clean and oil between leaves of spring. Balance load so that all springs will be equally weighted, and keep spring clip tight.

Body Bolts.—Watch for loose bolts and establish a systematic method of examination and tightening.

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Steering Column.—There should be no play in drag link or arm and only a small amount in worm.

General Repair Notes.—Care in removal of cotter pins, use of proper fitting wrenches, removal of parts with as little use of hammer and chisel and pliers as possible, thorough cleaning of parts before assembling, watchfulness that all gaskette nuts, etc., are replaced snugly, constant attention to prevent loss of parts, a receptacle kept at hand to hold same when removing. Never attempt more than you are master of, and never change standard parts by use of taps and dies.

In Camp.—The duties of ambulance companies in the camp consist in the routine care of men and transportation, instruction of personnel to insure that the company is ready at all times for field service between the camp infirmaries or regimental infirmaries and the camp hospital or other place designated for the reception of the sick. Company regulations are appropriately modified from those given above.

On the March.—The ambulance companies, less those detached, habitually march at the rear of the combatant troops. When out of the presence of the enemy such number of ambulances as may be required are ordered to march at the rear of each regiment to care for men who fall out, under the direction of the Regimental Surgeon. These ambulances after disposing of their loads as directed by the Regimental Surgeon, may report back to the ambulance companies each night. They habitually report to their companies when contact with the enemy is imminent. One ambulance company or the dressing station party thereof may be ordered to accompany the advance guard. During the European war it has been found advisable that ambulances do not accompany the advance guard in the presence of the enemy. Only the dressing station accompanies the advance guard.

GOING INTO CAMP

The company being on the march, the company commander with officers or noncommissioned officers in charge of detachments precedes the column to the camp ground. The company commander then designates a site for the kitchen and designates the general location and direction which the camp is to occupy. The officer in charge of transportation then selects a point for the head of the picket line. Upon arrival of the company the bearer detachment proceed immediately to the location of the kitchen where they remove their packs. The pack detachment and transportation proceed to the point selected for the head of the picket line where the pack detachment establishes a temporary picket line and removes the packs, leaving the saddles in place. The ambulances go into park. The first wagon which contains medical supplies only follows ambulances into park. The second wagon, which contains company equipment, etc., leaves the column and proceeds to a point designated for the kitchen. The third leaves the column and proceeds to a point designated for the head of the picket line, where the picket line, which had been coiled on running board is unwound and grasped

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by members of the pack train or stable detachment. The wagon is then run down the length of the site of the picket line. These same men then drive the picket pins and tighten the picket line. The wagon then goes into park. Wagon No. 2 upon arrival at the kitchen is promptly unloaded by detail from the bearer detachment, who proceed to spread the large fly from the top of this wagon and establish a kitchen. Other regular standing details are made from the bearer detachment to get water and wood and put up officers' tents and dig latrines at points designated by the company commander. The animals are meanwhile unharnessed, watered and tied to picket line. Hay is fed and collars cleaned. As soon as each platoon or detachment has completed its work in establishing camp, the noncommissioned officer in charge marches it to the site between the kitchen and head of the picket line where the First Sergeant has previously marked the ground to be occupied by the shelter tents of each platoon. Shelter tents are then put up, By this time dinner should be ready. Each sergeant knows the place to be occupied by his own platoon. Tents face each other. Allow each member to wash and prepare for his meal.

Each man should be assigned to certain specific duties as long a time as is practicable, in order that the work of the march can proceed without confusion. This method is also of great value as it tends to promote pride on the part of each soldier in his work, equipment, harness, animals, property, etc. For example: The ambulance company was divided into detachments and platoons, each under a N.C.O. as follows: bearer detachment, pack train detachment, ambulance detachment of three platoons, wagon detachment, kitchen detachment. On reaching the camp the bearer detachment worked as follows: Four men unloaded the camp wagon and assisted in establishing the kitchen, procuring wood, water, etc.; two men constructed latrines and four men put up officers' tents. The kitchen detachment began work at the kitchen. The pack train detachment removed packs and with the assistance of part of the wagon detachment established the picket line. The ambulance detachment after parking, unharnessed, watered, tied on the picket line, fed hay, cleaned harness and on every second day greased ambulances. Of the wagon detachment the blacksmith, farrier and saddler assisted in establishing the picket line. No. 1 wagon, containing dressing-station supplies, was parked. No. 2 wagon, containing camp equipment was left at the kitchen as shelter for supplies. No. 3 wagon, containing forage and stable supplies, immediately upon arrival drove the length of the site where the picket line was then parked and supplies necessary for the night were unloaded by the wagon detachment. Upon completion of the above the company assembled, pitched shelter tents and then went to mess, which was ready by that time. Animals were groomed at morning and evening stables. On breaking camp in the morning each detachment as far as practicable performed the same duty in reverse order.

Upon reaching the camp site each day the commanding officer should designate two camp site points, a kitchen site and wagon park head, for

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each organization. With these two points known each organization can go to its proper place and duty with military precision and without confusion. Great care should be paid to the care and condition of the animals, fitting of harness, etc. Each animal should be carefully inspected from head to foot by the company commander at evening stables, and general condition, slight injuries, etc., noted, and corrective measures necessary ordered. The pack mules require careful inspection. An inspection should be made at each hourly halt.

During a rail trip animals should be fed some hay, and those that can be reached, watered and fed oats.

Whenever a wagon becomes stuck in a mud hole the lead team should be immediately unhitched. Three picket pins should be driven in the ground about 30 yards ahead of the wagon, block and tackle attached to these pins and to the wagon. The lead team will then usually pull the wagon out quickly. It is believed that all marching commands should improvise fireless cookers, as they furnish hot food and drink immediately on arrival in camp. It is very important to gain information about roads, etc., from the inhabitants while on the march. As a result of this procedure the command can avoid bad stretches of country by making a detour or take advantage of short cuts. The use of the fly of the small pyramidal tent as a latrine covering for both officers' and men's latrines is advisable.

For treatment of animals see Par. 511, Signal Corps Companies, 1911, also G.O. 39, page 561, 1915.

LOADING AN AMBULANCE COMPANY ON RAILWAY CARS

The following is the program for loading an ambulance company on railway cars by teams, with a block and tackle. If no team is available, ten men will be required in its stead.

General Charge

Company Commander

First Sergeant

2 Orderlies

Flat Cars

1 Officer (or First Sergeant).
1 Sergeant (1st platoon).
1 Sergeant (2d platoon), roll and block.
1 Driver.
4 Pull-up men, orderlies and driver (1st platoon).
2 Steady tongue.
2 Roll (orderlies 2d platoon).
2 Remove tongues, (drivers 1st platoon).
4 Block orderlies (3d platoon).

Stock Cars

1 Officer or Company Commander.
1 Sergeant, load (stable).

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1 Sergeant, start (3 platoon).
1 Man in car (farrier).
2 Men at door } Drivers.
7 Men, lead up }

FREIGHT AND BAGGAGE

1 Officer.	
1 Sergeant, first class.	
1 Sergeant in car.	Bearer detachment.
1 Sergeant outside car.	Pack detachment.
5 Men inside car.	Bearer detachment.
6 Men in wagons.	2 Drivers, 4 privates.

BAGGAGE

1 Sergeant.	Mess.
1 Cook.	
3 Men inside car.	Kitchen force.
3 Men in wagons.	1 Driver, 2 bearer det.

If short of officers use First Sergeant as one such. If short of men, drivers to lead up, may be 4. Roll vehicle to point where block and tackle can be attached, tongue men hold tongue steady, roll men roll wagon in car to proper place for removing tongue. Block men nail blocks engaging wheels to car floor. Start Sergeant keeps vehicles moving up to car. Vehicles are loaded at the end of the train of flat cars and rolled forward, they are not loaded over the side of the car.

THE PACK DETACHMENT

The object of this instruction is the detailed training of the individual packers in saddling, fitting, cleaning and caring for the equipment, adjustment and loading of packs and the care and management of the pack mules. Additional information on this subject may be obtained from the "Manual of Pack Transportation," Daly.

THE MEDICAL DEPARTMENT PACK

1. The Medical Department pack consists of the pack saddle proper and a number of accessory articles. The pack saddle proper and the accessory articles are shown in Fig. 1.

The packs are placed on poles and aligned in order, in the vicinity of the picket line, each saddle placed across top, breeching and breast collar folded back over their respective ends of the frame, the cincha across saddle, the folded blanket laid on top and the whole covered with the manta secured to the load at the bottom. Packs should be improvised for the saddles when practicable. In garrison the saddles are aligned on racks each over its respective pack.

The blanket is cared for as described in Par. 426, Drill Regulations for Sanitary Troops.

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TO BLIND THE MULE

One packer is assigned to each mule, two packers work together in loading, the man assigned to each mule working on the near side (left). A short picket line of small rope with pins should be provided for the purpose of temporarily securing the animals in the vicinity of the packs to load or

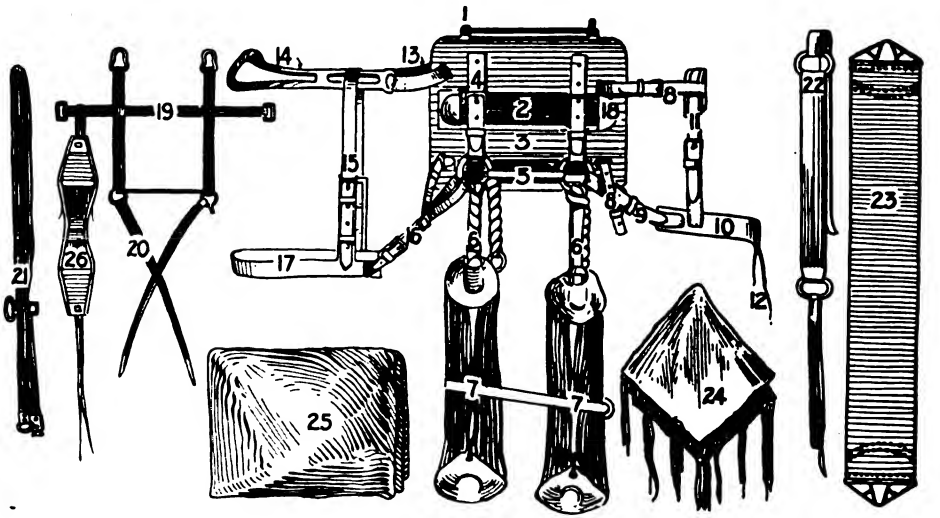

FIG. 1.

	Number
No. 1. Pack Frame, metal	1.
No. 2. Stretchers or spreaders for saddle pads, corrugated, metal	2.
No. 3. Saddle Pads	2.
No. 4. Quarter straps	4.
No. 5. and 6. Quarter straps, ring sets, complete, consisting of two rings with leather union and two cincha straps	2.
No. 7. Cincha, horse hair, double	1.
No. 8. Accessory leather straps	6.
No. 9. Breast collar strap	2.
No. 10. Breast collar body piece	1.
No. 11. Breast collar neck piece	1.
No. 12. Breast collar choke strap	1.
No. 13. Fork straps for turn back	2.
No. 14. Turn back and crupper, complete	1.
No. 15. Breeching hip strap	1.
No. 16. Breeching straps	2.
No. 17. Breeching body piece	1.
No. 18. Thongs, rawhide	6.
No. 19. Cargo frames, (modified Rice frames) Nos. 1 and 2, of each	1.
No. 20. Straps, leather, for attachment of frames to cincha rings	4.
No. 21. Load straps, web, long and short, of each	2.
No. 22. Load cincha, (belly piece) short, complete with 2 cincha straps	1.
No. 23. Load cincha, (top piece) long, complete	1.
No. 24. Manta, canvas, 6 x 6 feet, with 20 rawhide thongs	1.
No. 25. Saddle blankets	1.
No. 26. Blind, cupped, complete	1.

at site selected for unloading. The outfit being in the rear of the mule, the instructos for purposes of drill causes packers to stand to heel and commands: "Saddle." Upon which the equipment is placed upon the mule, in the following order: Blind: The packer standing on the near side takes hold of the halter with the left hand, grasps an edge of the blind in the right, carries it over the mule's neck, brings the blind well to the front

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over the mule's ears, places it over his eyes, and the tail of the blind on top of the neck.

Blanket.—The near packer holding the blanket, places the blanket on the mule's back using great care never to pull the blanket forward without raising it and to see that it is smooth and free from wrinkles.

Saddle.—The packer grasps the front edge of the left saddle pad in left hand, passes right forearm palm down behind and under the right pad, raises the saddle over the mule's back and sets it squarely in place. If not exactly in place it must be raised before readjusting. The front of the saddle is the end with the narrower arch in the frame. The saddle should be placed with the center in center of mule's back. This with an ordinary-sized mule will bring its front edge about two fingers' breadth behind the shoulder blades. The breeching crupper and breast strap are now adjusted so that they are barely snug without being tight. The saddle is now cinched in place. The front edge of front cinch should clear the elbow about 1 inch when the mule is in motion. Both cinchas should be sufficiently tight, that when the mule expels the excess air he has drawn in, there can be no movement of the saddle. To insure this, cinchas should be examined after about twenty minutes.

Frames.—Frame No. 1 and then No. 2 are placed in position on the saddle by near and off packers respectively who then buckle the leather straps attached to the bottom of each frame to the cincha rings so that the frame is held tightly against the saddle but not so as to bend the frame. Long load straps are placed on their respective hooks on the off side and the short load straps snapped into the front D rings on horizontal bars of frame.

Load.—Each packer picks up his respective box with top toward him, back down and approaching the mule; both set the boxes in their respective frames at the same time, holding the box in place with the left arm and shoulder while the short load strap is brought from front to rear, secured in rear D ring on horizontal bar and buckle tightened on each side. The top load if any is now placed between the side packs, care being taken that it is in the center and will remain there. The long load straps are then passed over the load from off to near side and secured in near side hooks. Each packer then presses upward on his respective pack with his shoulder to raise the pack about 2 inches, the near packer tightening the buckles in the long load straps at the same time. The short load strap is then tightened on each side. Each packer now grasps his side pack by the upper corners and together they pull downward settling the packs in place. At this and at all times the center of the saddle must be parallel with the mule's back as determined by observation from the rear. The load cincha adds security. To put on, the near packer passes the folded load cincha over the packs retaining the end of the top piece in his left hand. The off packer sees that it is straight and passes the free end of the belly piece under the mule, the near packer now grasps the latigo strap or belly piece, passes it over bar in end of top piece from without inward, then through ring in

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belly piece from within outward, cinches tightly, and secures latigo in usual manner. The manta may now be fastened over the whole load if protection from the weather is desired, otherwise it will be used to wrap the top load. Unloading and unpacking are accomplished as above, working in reverse order.

REMARKS ON PACKING

It is only by constant care and attention that pack mules can be kept in serviceable condition. They must be exercised daily with loads in order to train them and keep them in condition for service.

Loads.—Seasoned pack mules in careful and experienced hands will carry a load of 250 pounds, for ordinary marches day after day. However, a load of 200 pounds will be found more satisfactory. Loads up to 350 pounds can be carried for short distances only. The side packs on each load must be of the same size and weight. Loads should be removed leaving the saddle in place whenever the column makes long halts. When unpacking at the end of a day's march the load should be removed at once, the cinchas loosened and the saddles left in place for fifteen minutes. Bunches are caused by undue pressure driving the blood from the skin, the sudden release of pressure as in removing the load and saddle at once after several hours' use is a great factor in their production. To prevent, great care must be exercised to see that the blanket is smooth and that the padding in the saddle is even. When they appear, a sack wet with cold water should be kept cinched tightly over the bunch and the bunch rubbed by hand at intervals. The next day measures should be taken to relieve pressure over this point. This may be done by using a blanket or sack with suitable holes cut in it or by having an experienced man remove a small portion of the padding from the saddle over the bunch. This latter, however, requires special care and experience and is dangerous in other hands. The padding in the saddles when used continuously tends to bunch and become thin at the upper corners. When this occurs, an opening should be cut in the canvas under the metal frame on the outside of the pack and all the hair padding removed. It should then be picked over to break up all bunches and repacked, the greatest care being taken to repack evenly throughout. This tendency to bunch may be obviated partially by running two seams across the upper pocket of the pack thus dividing it into three compartments.

NATURE AND AMOUNT OF SUPPLIES

It is difficult to make an estimate of the quantities of supplies required for three months or the nature of supplies most needed. Of course the supplies most needed are: rations, forage, wood and other articles necessary to maintain the company from day to day. The amounts of these required to be carried in campaign, and for ten days supply for camp purposes are listed for the quatermaster supplies in G.O. 39, W.D., 1915. For ordnance, supplies are issued for six months. Allowances for ambulance

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companies will be found on Forms 2589 and 2590, O.D. For medical supplies Pars. 874 and 875, M.M.D. give the standard equipment of an ambulance company. The length of time any of these supplies as listed will last depends very largely upon the conditions of service, condition of equipment, etc. The following quartermaster supplies have been found sufficient for three months: Brooms, stable, 2. Caulks, toe, horseshoe, 100 pounds. Iron bars, assorted, 60 pounds. Lampblack, 2 pounds. Leather harness, 2 sides. Bridle, leather, 2 sides. Leather collars, 2 backs. Nails, horseshoe, 25 pounds. Needles, assorted, harness, as listed. Oil, neats-foot, 10 gallons. Oil, sperm, 1 pint. Rivets and brads assorted, as listed. Horseshoes, 200. Mule shoes, 600. Soap, harness, 15 pounds. Axle grease, 50 pounds. Mineral oil, as listed. The medical supplies given for the use of the company when it operates as a dressing station are sufficient but the period for which they will last will depend upon the amount of this work that is done. A certain amount of medicines and dressings will be required in addition to those listed for daily routine dispensary service within the company itself.

The following drugs and dressings are sufficient under ordinary conditions of field service for 100 animals for one month:

Acid, Boracic:	4 ounces. Sat. sol. for disinfection of wounds of eye and vicinity.
Carbolic acid (phenol):	16 ounces. A 2 per cent. solution to disinfect wounds of body.
Alcohol:	1 quart. 2 ounces in 1 pint of water as a quick stimulant.
Aloes:	20 ounces. 1 ounce as a cathartic, ½ ounce to 1 pint of water stimulates wounds.
Alum:	4 ounces. ½ ounce to 1 pint of water a slight stimulant to wounds.
Ammonia, arom. spts.:	2 ounces in 1 pint of water a quick stimulant.
Ammonia, aqua:	8 ounces. Used to make liniments.
Cannabis indica:	16 ounces. ½ ounce to the dose in case of colic to relieve pain.
Charcoal:	8 ounces. Used as base for dusting powders.
Creolin:	1 pound. ½ ounce to quart of water as a disinfectant for wounds. Parasiticide.
Ether, spirits, nitrous:	16 ounces. ½ to 2 ounces in pint of water as a diuretic stimulant.
Iodine crystals:	4 ounces, with which to make a sat. sol. or tincture, for application to sprains or application to field of operation.
Copper sulphate:	1 ounce. To cut down granulations (proud flesh) when used in powder form or strong solution. As astringent for wounds in 5 per cent. to 10 per cent. solution.
Cosmoline:	1 pound. Base for ointments.
Iodoform:	4 ounces. For wounds.
Chloroform:	1 pound. Parasiticide and anesthetic.
Tannic acid:	4 ounces. For wounds.
Mercury, bichloride tablets:	1 tablet in pint of water as a disinfectant for wounds.
Olive oil:	1 pint, with which to make liniments.
Turpentine:	1 pint. To make liniments or internally as antiferment in colic.
Tar, oil of:	4 ounces, with which to make ointments or treat diseases of the foot.

DRESSINGS

Absorbent cotton:	4 pounds, for dressings and sponges.
Antiseptic gauze:	1 package, for dressing of wounds

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Oakum:	3 pounds, to be used in dressing wounds. Especially foot and tendons.
Red flannel bandages:	1 dozen.
White cotton bandages:	2 dozen.
Silk thread:	½ ounce.
Soap, castile:	2 pounds.
Sponges:	4 small.
Plaster, adhesive:	1 roll.

INSTRUMENTS, ETC.

Farrier's case:	1
Thermometer:	1
Twitch:	1
Drenching bottle:	1
Bottles and corks, 4 oz:	2
" " " 8 ":	2
Bottles and corks, quart:	2
Basin, tin:	1
Paper, tissue, sheets of:	30
Trocar and canula:	1
Dental instruments:	1
Mouth speculum:	1
Veterinary Hypodermic Syringe:	1
1 Balling, Gum:	1
Catheter:	1
Rectal Pump and Hose:	1
Casting Harness	1
A liniment:	Olive oil, 3 ounces; turpentine, 2 ounces; ammonia, sol. of, 2 ounces. Mix well. Apply with friction.
A stimulant:	Aromatic spirits of ammonia, 2 ounces; alcohol, 1 ounce; water, 16 ounces. Mix. Give as a draught.
	Or Olive oil 1 ounce; camphor 4 drachms. Mix with gentle heat. Inject in two doses 12 hours apart.
	Or Strychnine sulphate, ½ to 1 grain and digitaline, ¼ to ½ grain. Inject hypodermically and repeat after 6 hours.
A good dusting powder	for wounds: Air-slaked lime, 16 ounces; powdered charcoal, 2 ounces. Mix. Or use iodoform and tannic acid equal parts. Dust on open wounds.
An ointment:	Oil of tar, 1 ounce; creolin, ½ ounce; cosmoline, 6 ounces. Mix. Or Zinc oxide ointment or 2 per cent. carbolic acid in cosmoline.

FOR COLIC

Stimulating purgatives for use in colic where a rapid evacuation of bowel contents is desired. Administered hypodermically.

Arecaline hydrobromide, ½ grain to 1 grain. May be repeated in 6 hours.

Or Eserine, ½ grain to 2 grains. May repeat after 12 hours.

Or Pilocarpine, 1 grain.

Or Arecaline hydrobrom, ½ grain
Strychnine sulph. ½ grain } combined.

Books treating of the diseases of animals are:

"Materia Medica and Therapeutics," Whitman, published by Alexander Eger Publishing Co., Chicago, Ill.

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"Veterinary Medicine and Therapeutics," Winslow.

"Pathology and Therapeutics of the Diseases of Domestic Animals," Hutyra and Marek.

"Elements of Hippology," Capt. E. C. Marshall.

"The Army Horse in Accident and Disease."

The two latter can be purchased from the Book Department of the Army Service Schools, Fort Leavenworth, Kan.

Method of Accounting for Equipment C, and List of Blank Forms to be Used. (G.O. No. 58, W.D., 1917).

1. Equipment C in the possession of regiments, separate battalions, field hospitals, ambulance companies, or other tactical organizations, supplied with such equipment, will be accounted for as prescribed in paragraphs 681–A to 681–N, Army Regulations, published in C.A.R. No. 56, W.D., 1917. For existing organizations of the Regular Army and for organizations of the National Guard, now in the military service of the United States, the method of accountability will become effective June 30, 1917. For organizations of the Regular Army hereafter created, for organizations of the National Guard hereafter called or drafted into the military service of the United States, and for other organizations of the Army of the United States that may be organized pursuant to law, the method of accountability will become effective on the date of creation, organization, muster, call, or draft of any such forces. The voucher forms now issued by the Adjutant General of the Army and the various bureau of the War Department will be continued in use until exhausted, and until a sufficient supply of new forms issued by the Adjutant General of the Army can be printed and distributed. All articles of equipment C pertaining to such units being accounted for by other officers of a unit will, on June 30, 1917, be regularly invoiced to the proper unit supply officer and final returns closing their accountability rendered to the chiefs of the bureaus concerned by such officers as have previously made returns for the property.

2. The following is a list of the new and revised forms authorized that will be used with this method of accounting and will be furnished to regimental or other unit supply officers from the various department headquarters upon request:

Form No. 196, A.G.O. Report of survey. This form has the same number as previously, but has been revised.

Form No. 448, A.G.O.; Form No. 448–a, A.G.O.; and Form No. 448–b, A.G.O. Record of property issued by post, regimental, and other officers on memorandum receipt. These forms are the same as previously issued for this purpose.

New forms referred to in paragraphs 681–B, 681–C, and 681–D, A.R.:

Form No. 599, A.G.O.[1] Semiannual return, front cover. Form No. 599–a A.G.O.[1] Semiannual return, inside sheets. One used for each article.

Form No. 599–b, A.G.O. Semiannual return, back cover. Contains certificates of correctness and transfer of accountability.

New forms to cover transactions under paragraph 681–F, A.R.:

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Form No. 600, A.G.O. Invoice and receipt.

Form No. 601, A.G.O. Covers replacement of expendable articles and others pertaining to equipment C; also ammunition expended in practice firing, etc.

Form No. 602, A.G.O. Statement of charges against enlisted men.

Form No. 603, A.G.O. Due certificate. This form replaces the present Form No. 544. Credit voucher.

Form No. 604, A.G.O. Requisition for expendable articles for maintenance of equipments. This form replaces the present Form No. 543, A.G.O., Issue of expendable articles to organization provided with unit accountability equipment.

The following standard forms will also be used in this system:

Form No. 322, W.D. Abstract of funds received from authorized sales.

Form No. 1, I.G.D. Inventory and inspection report.

3. General Orders, No. 59, War Department, 1907, and No. 52, War Department, 1915, as amended, are rescinded. (2474891B.)

Correction of General Order Naming Forms. G.O. No. 102, August 4, 1917.

II. 1. The third, fourth, and fifth lines, page 2, of General Orders, No. 58, War Department, 1917, are rescinded and the following substituted therefor:

Form No. 599, A.G.O. Semiannual return, inside sheet. One used for each article.

Carbon copy for Form No. 599, A.G.O.

Form No. 599–a, A.G.O. Semiannual return, front cover.

2. The first and second lines, page 5, of the List of Blank Forms Supplied by the Adjutant General's Department, are rescinded and the following substituted therefor:

599. Property return. Inside sheet.

599 (carbon copy). Property return.

599–a. Property return. Front cover. (315.03, A.G.O.)

Guards.—One of the duties of ambulance companies in the field is to furnish guards for field hospitals when they are open for the reception of patients. In addition to this the regular routine camp, picket line and stable guard must be maintained by the company as is done by any troop, battery or company of the line. For this reason considerable attention should be paid to the proper performance of guard duty. If several sanitary units are serving together in the same camp, the senior officer present will make details of the junior officers to act as officers of the day. The number of men detailed for guard will be the minimum necessary to insure proper protection of property. Guard orders should always be written out and posted in order that all concerned may be entirely familiar with the duties of the guard. Provisions of the Manual of Interior Guard Duty should be strictly complied with except that the informal guard mounting as noted here should be held instead of that prescribed in the Manual.

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THE DRESSING STATION

The dressing station is a place for the collection of wounded from aid stations and those passed by regimental personnel, and for their care until they can be evacuated to the rear. Treatment is usually limited to first aid and readjustment of dressings requiring it. No operative work can usually be done except that requisite for the immediate saving of life. A record will be made of all patients received and forwarded and diagnosis tags affixed to those who do not have them. This station should be established under the supervision of the Director of Ambulance Companies, by order of the division surgeon, acting under the division commander. It should not ordinarily be established until the advance has ceased or more wounded have accumulated than can be cared for by the regimental personnel. An ideal site, is one near the front, sheltered from rifle fire and out of the way of probable artillery fire, accessible from the front and with a passable road to the rear, and near wood and water. In defensive positions this station may be established quite early and often may be so arranged as to provide facilities for more extended treatment. As soon as established the division surgeon, and the surgeons of line troops on the sector served should be notified, the latter usually by the litter bearers. The bearer detachment under command of an officer and with sufficient n.c.o.'s to supervise the work moves forward towards the regimental aid stations evacuating them by litter, or by ambulance, whenever possible, and rendering first aid and litter service to the wounded found unattended. All wounded able to walk should be compelled to do so and those able to return to the firing line directed to rejoin their companies. This detachment should plainly mark the best route between the aid station and the dressing stations with bandages or guidons. As soon as the conditions of fire render it possible the ambulances are brought up to evacuate patients unable to walk to the designated field hospital. It will usually be practicable to bring the wagons up at this time and renew the supply of dressings and rations. The road between dressing station and the field hospital should be conspicuously marked in order that ambulances and walking patients may keep it readily. Additional dressings will be furnished on request of units further to the front.

PERMANENT DRESSING PARTY

Enlisted Personnel

Receiving and Forwarding Dept.	1st Sergeant and Company Clerk.
	Sgt. (Platoon Leader.) Chief Dresser.
	Pvt. No. 1, D.S. Chest. Instruments, medicines and solutions.
Dispensary Dept	Pvt. No. 2, Asst. Dresser.
	Packer No. 1, General Assistant.
	Packer No. 2, Handling patients, equipment, water, etc.
Seriously Wounded Dept	Sgt. Platoon Leader. In charge.
	Pvt. No. 3, Nurse.

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Slightly Wounded Dept.	Sgt. Pack Detachment. In charge. Pvt. No. 4, Nurse.
Kitchen Dept.	Sgt. Pack Det. In charge. Packer. No. 4, Cook. Packer No. 3. Wood, water and picket line.
Mortuary (if required).	Sgt. Pack Det. In charge. Packer No. 3, Asst.

NOTE.—Privates Nos. 1, 2, 3 and 4 are taken from Bearer Detachment. If additional assistants in departments are required, 12 Ambulance Orderlies are available. Privates Nos. 1, 2, 3 and 4 will carry litters when moving forward with Dressing Station Party, these litters to be used as operating tables in Dispensary.

TO ESTABLISH DRESSING STATION

Temporary picket line is established near dispensary dept. for mules 1, 2, 3. Pack mule No. 4 is led to site for kitchen and unloaded by Packer No. 4 assisted by Pvt. No. 4, who then fastens mule to temporary

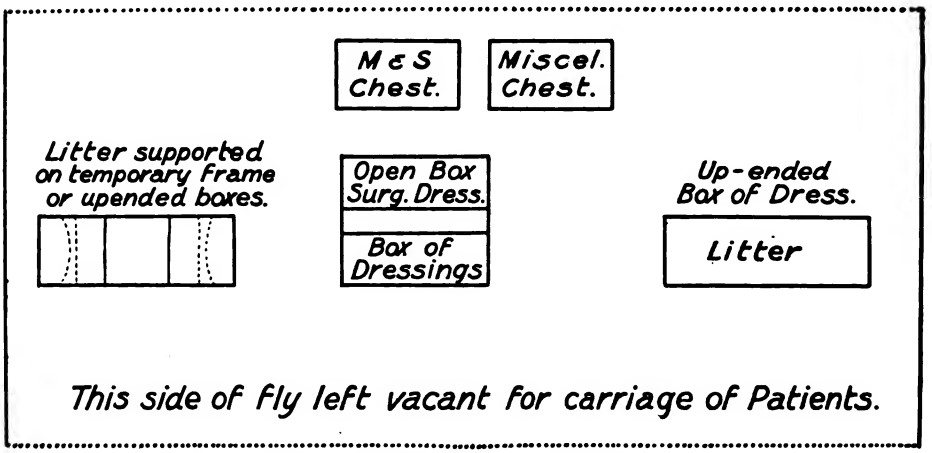

FIG. 2.—Diagram of Dressing Station.

picket line and assists in erection of flys, while Packer No. 4 (cook) procures wood and water and starts fire. Packer No. 1 erects markers. Packers No. 2 and 3 lead mules to permanent picket line and establish same. When above duties are completed, all, except cook, assist in forming station according to plan outlined above.

TO CLOSE DRESSING STATION

Signal.—One blast on whistle for attention. Arm signal is as follows: Extend one arm vertically and describe perpendicular arc to front. Privates 1, 2 and 3 pack chests, etc., carry same to temporary picket line, lower fold and tie flys, secure poles and assist pack det. in loading. Packer No. 1 procures markers. Packers 2 and 3 bring up mules 1, 2, and 3, establish temporary picket line and start to pack. Packer No. 4 packs kitchen equipment, puts out kitchen fire and assisted by private No. 4, who

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brings up mule No. 4, packs mule No. 4 at site of kitchen and then joins pack detachment.

MULES ARE HABITUALLY PACKED AS FOLLOWS

Mule No. 1: Medical and Surgical Chest. Miscellaneous Chest. Top. 6 g.i. buckets, 1 pair of water bags.

Mule No. 2: 2 Boxes Surgical Dressings. Top: 6 blankets gray, 3 blankets rubber.

Mule No. 3: 2 Boxes Surgical Dressings. Top: same as No. 2.

Mule No. 4: 2 Food Boxes. Top: tent flys.

NOTE.—When blankets are not carried, water bags are carried on No. 2 and tent flys on No. 3.

PREPARATION OF ORDINARY TRANSPORTATION FOR WOUNDED—GENERAL

In active service, the ambulances available may be insufficient for the transportation of the sick and wounded. Under these circumstances any available transportation should be used. This will include wagons and motor trucks attached to sanitary units, wagons and motor trucks attached to line troops or Q.M.C. and civilian vehicles of all kinds. In the use of the first class, care must be used not to employ transportation for this purpose that may be needed for its normal functions. In the third class authority to use this transportation should be obtained from the proper source and a receipt given the owner for his property or for the use of his property while engaged in this work.

TO PREPARE VEHICLES

(*a*) **Escort or Farm Wagons.**—Six inches of closely packed straw or like material should be placed in the bottom of the wagon bed. Three patients can be carried on each escort wagon, one on a litter if desired at the front of the wagon bed, one on the straw beside him and one sitting up across the bed at their feet. If all are sitting more can be carried. Hay racks covered with straw will carry eight patients placed crosswise.

(*b*) **Motor Trucks.**—About 6 inches of sand or dry earth should be placed in the bottom of the truck in order to secure the maximum of ease from springs. This should be covered with canvas if practicable and this with about 6 inches of closely packed straw or similar material. Five or six recumbent patients can be carried in each truck in this manner as comfortably as by motor ambulance. They should be arranged as follows; Four patients on the straw or three on litters, with heads toward the front and two lying down at their feet across the truck bed. Fracture and other serious cases should be carried at the front of the vehicle.

Passenger vehicles, carriages and touring cars are valuable for sitting patients only, as recumbent cases can be carried only with great inconvenience and waste of space.

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To load vehicles: The movements described in "To load and unload Ambulances" will, if care is used, meet the requirements of any situation of this character. Additional bearers will be needed and unusual care and supervision required to see that patients are handled with the minim discomfort.

Messengers and Signalling.—The utmost care must be exercised to maintain communication between the various elements of the sanitary service. The danger of losing touch is ever present and results in disorganization and non-effectiveness. Each element should keep in touch with those on each flank, front and rear, with superior authority and be informed as clearly as possible of the disposition of line troops in the vicinity. To this end the field lines of the Signal Corps can be used when available for important matters but they will often not be at hand and must not be burdened with minor affairs. Messages of importance must be written and sent by reliable bearer who is not apt to become lost. When sent verbally, the orderly should repeat the message before starting to insure that he has it correctly. Orderlies, musicians, etc., should be trained in the correct transmission of messages.

Signalling is an excellent method of exchanging messages in ambulance company service—much more so in this war for ambulance companies than the line. These latter are too exposed to enemy fire to use it to advantage.

The sanitary tactics of ambulance companies are discussed in the Manual for the Medical Department, Straub's "Medical Service in Campaign," and Munson's "Sanitary Tactics," and briefly in the chapter on the "Evacuation of Wounded."

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CHAPTER V

THE FIELD HOSPITAL

Fie d Hospitals are provided in our Army in the proportion of four to a division. Their organization, equipment and functions and the manner in which the last are performed are discussed in the Manual for the Medical Department, in Straub's work on "Medical Service in Campaign" and in Munson's "Sanitary Tactics." Drill is discussed in the Drill Regulations and Service Manual for Sanitary Troops. This chapter considers chiefly matters of internal administration. Most of it is derived from articles and unpublished memoranda by Lt. Colonel William W. Reno, Medical Corps.

The Director of Field Hospitals should have under his immediate command in addition to his orderly, a sergeant and two privates, first class, or privates. The duty of the detachment should be to ascertain before a battle, what shelter is available for wounded, and what local doctors, ministers, priests, nurses and others are willing to assist in caring for wounded. This detachment, assisted by details from the ambulance companies or field hospitals, should prepare suitable buildings for occupancy as hospitals.

Field Hospitals in the German and Austrian services are organized in the proportion of one to each 3350 men. Each accommodates 200 patients, *i.e.*, there are hospital accommodations for 6 per cent. of the command. These hospitals are capable of expansion to 300 beds. In the French service the hospitals are more diversified, there being four types on duty with a corps, but their facilities for accommodation are in effect practically identical with those existing in the German Army. The English service provides three to each division, each such hospital accommodating 200 patients. The four hospitals provided to an infantry division in the American service accommodate 216 patients each. Collectively they provide for what has been estimated at 10 per cent. of casualties among the troops engaged, this per cent. representing the average number of casualties. Hospitals for the line of communication of German and Austrian services have the same equipment and personnel as their field hospitals. In our Army base hospitals are provided for use on the line of communication and at the base. These have a normal quotum of 500 beds each but are very elastic.

Under the revised tables of organization the hospital provision for sick and wounded in the American service at the front and on the line of communication is much larger than that formerly contemplated. This has been incidental to reducing the size of the divisions engaged in this war. The hospitals should be adequate to care for each day's wounded. Though the wounded in a given division might be so numerous that they would over-

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whelm any field hospital service that could reasonably be provided, an average maximum can be determined, and hospital accommodation made to conform thereto. Such an average is, of course, usually fallacious when applied to any actual individual condition and is of value only in determining a reasonable basis for computation.

The average maximum loss per battle day of large American units in action is 12 per cent. In the manual for the Medical Department average casualties are estimated at 10 per cent. of the troops engaged. Applied to a division the former proportion indicates that there would be 2280 casualties if the combatant strength of a division were as now authorized (19,000 men) and if all troops were engaged. From this number of casualties, however, should be deducted 14 per cent. who it is estimated, would be killed on the basis of 1 killed to 6 wounded, the proportion during the last 6 months of 1916, reported by the French and British armies. This leaves a balance of 1965 wounded who would require accommodation in a division. To this number must be added the sick admitted in the proportion of 3 per 1000 per day and often augmented on the eve of an engagement, though the reverse is said to occur in the British service. In any event it is probable that as the Manual states, not more than 10 per cent. of the command will require hospital treatment each battle day. A medical officer can care for only about eight patients per hour. These facts illustrate the prime function of a field hospital and the range of its activities. It is in this war but a magnified dressing station, where only the more urgent work is performed. As the British state, it is essentially a receiving or forwarding unit, for it is not intended for prolonged occupation by wounded.

Prior to this war, the same division was seldom engaged actively on successive days. This situation afforded a better opportunity for evacuation of field hospitals than would otherwise have been obtainable. Now, however, divisions may be engaged for many successive days as at Verdun, and wounded accumulate at the field hospitals unless there be great abundance of transportation, freedom of movement by it and a comparatively short distance to the evacuation hospitals. But the loss which a division may undergo in battle—from 25 to 30 per cent.—is spread usually over several days, so that evacuation can be progressing in the interval between its engagements. Lack of adequate hospital facilities has a distinct depressing influence upon the morale of the troops and diminishes the popularity of the war among the civil population supporting it.

The number of field hospitals should be as small as possible in order to avoid unnecessary reduplication of administrative and other routine service, yet it must be large enough to provide accommodation at those points to which the wounded can most readily be congregated.

Two periods of training are prescribed for Field Hospital personnel: the first for five months is indoor instruction, the second of seven months is outdoor training. The latter is largely an application of the knowledge gained in the former and instruction in field operations. The course of indoor instruction in Colonel Reno's unit comprised a preliminary nine-day period

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and a four-months' period which led to a diploma. All men on joining took the nine-day course which gave a comprehensive discussion of the Medical Department. Thereafter they were assigned to whatever parts of the course they appeared qualified to take. Four classes in each subject were conducted concurrently for those whose qualifications differed. Examinations were held monthly and special courses in addition to those mentioned were provided for those who were backward.

The instruction is given by the officers of the Field Hospital Company.

The schedule requires four (4) hours of didactic instruction and two (2) hours of ward or other demonstration exercises. During the didactic instruction on each day a quiz upon any subjects or work should supplement the lecture. If the Field Hospital is stationed at an Army Post and if at any time there should be in the Post Hospital wards, cases of peculiar interest or importance, a portion of the demonstration hour may be devoted to such cases in addition to the subject laid down in the schedule.

The commanding officer of the Field Hospital assigns himself and his subordinates to such subjects for instruction as, in his judgment, each is best qualified to teach and demonstrate.

The instruction is continued daily, except Saturday and Sunday, as scheduled.

The following is an excerpt from Colonel Reno's schedule of instruction.

The references to the Manual for the Medical Department (M.M.D.) relate to paragraphs. Those to Mason's Handbook for the Hospital Corps (M.H.B.) relate to pages.

SCHEDULE RECRUIT INSTRUCTION

First Day

A.M.	
8:00 to 8:50	Organization of Medical Department; Sanitary Detachments and Units. (Personnel. Duties and functions in time of war. M.M.D., 1,33 to 50, 530–533.)
9:00 to 9:50	Demonstration. Beds and bed making. Baths and bathing. M.H.B. 136–140.
10:00 to 10:50	Objects of baths in sickness. Various baths to be employed with indication and contra-indications. M.H.B., pp. 141–145.
P.M.	
1:00 to 1:50	Status of medical personnel and material in time of war. Insignia. Geneva Convention. Rules of land warfare.
2:00 to 2:50	Demonstration of ward management. Ventilation, heating, police. Special wards for special diseases. M.H.B. pp. 125–130.
3:00 to 3:50	Ward management and nursing. Discipline. Duties of enlisted personnel. M.H.B. pp. 131–135, M.M.D. Par. 279.

Second Day

A.M.	
8:00 to 8:50	General outline of the evacuation of the wounded in time of war. Names of sanitary stations and organizations concerned in the aid and evacuation of the wounded. M.M.D. 627–629, 687, 809 (also reference to separate units).
9:00 to 9:50	Demonstration of external applications in sickness.

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10:00 to 10:50 Objects and uses of external applications in sickness. Character of applications and how and when applied. Dangers and contra-indications. M.H.B. pp. 151–156.

P.M.

1:00 to 1.50 Classification of casualties in action and estimated requirements for care and evacuation of wounded. M.M.D. 628, 826, 889. Straub "Medical Service in Campaign."

2:00 to 2:50 Demonstration of febrile cases in wards. Temperature, pulse and respiration. General signs and symptoms common to febrile conditions.

3:00 to 3:50 Value of clinical thermometer, its use and care. The temperature, pulse and respiration in health and disease. M.H.B. 158–159.

Third Day

A.M.

8:00 to 8:50 The regimental aid station with special reference to its correct location and the reason therefor. Duties of its personnel. Equipment, diagnosis tags. M.M.D. pp. 633, 642, 650, 674, 679, 680, 866, 868.

9:00 to 9:50 Demonstration of enema, irrigations (especially of the ear and eye). Removal of foreign bodies from the eye and ear. Catherization.

10:00 to 10:50 Uses of enemata, kinds and indications. Irrigations, objects, uses, various fluids used and particular indications. Catherization, why and when required. Method, indications and contra-indications. Dangers. M.H.B., pp. 146–150.

P.M.

1:00 to 1:50 The ambulance company: Equipment and personnel; functions and duties; reports and returns. M.M.D. "Ambulance Companies."

2:00 to 2:50 Demonstration of correct dressing and bandaging. If practicable the application of bandages and dressings to actual conditions in the wards.

3:00 to 3:50 Principles of bandaging. Bandaging materials and special uses. Quiz and discussion of previous hours work in the wards.

Fourth Day

A.M.

8:00 to 8:50 The dressing station: When, where and by whom established and conducted. Equipment and personnel. Functions and how performed. Reports and returns. M.M.D. (Index).

9:00 to 9:50 Demonstration of clean wounds and dressing of same.

10:00 to 10:50 Discussion of wounds with regard to sepsis and asepsis; causes of sepsis. Germ theory of disease. M.H.B. pp. 74, 182, 215.

P.M.

1:00 to 1:50 The Field Hospital: Personnel and equipment (in a general way). Functions and establishment (when and where). Character of its work, how and when evacuated, its relation to the division. Reports and returns. M.M.D. (Index) "Field Hospitals."

2:00 to 2:50 Demonstration of sterilization of instruments and hands.

3:00 to 3:50 Sterilization and disinfection. How established and maintained during operation. Various methods and indications for employment of each.

Fifth Day

A.M.

8:00 to 8:50 The station for slightly wounded: Where, when and by whom established and conducted. Personnel and material, how and where obtained, duties and operation. Reports and returns.

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9:00 to 9:50	Demonstration of infected wounds and dressing of same. Venereal cases and military status of patients (G.O. 31, W.D., 1912 and G.O. 45, 1914).
10:00 to 10:50	The evacuation ambulance company: Equipment and personnel as compared with ambulance company of sanitary train of division Functions. Augmentation of transport facilities after engagements. Rest stations and sanitary squads. Casual camps in war.
P.M.	
1:00 to 1:50	Hospital trains, boats and ships: Personnel, equipment and administration. Reports and returns. Medical supply depots: Location, personnel, distribution of supplies, how accomplished.
2:00 to 2:50	Demonstration of preparation of patient for operation.
3:00 to 3:50	Surgical nursing.

Sixth Day

A.M.	The evacuation hospital: Number and distribution, personnel and
8:00 to 8:50	equipment. Duties.
9:00 to 9:50	Demonstration of microscope: Stained specimens, cultures, urinalysis.
10:00 to 10:50	Value of laboratory aids and microscope in diagnosis and treatment.
P.M.	
1:00 to 1:50	The base hospital: Personnel and equipment (general), establishment and purpose, reports and returns, convalescent hospital, contagious disease hospital.
2:00 to 2:50	Demonstration of foot weakness and deformities of the feet.
3:00 to 3:50	Causes of foot troubles: Results from military standpoint, selection of recruits, fitting of shoes and stockings and care of the feet.

Seventh Day

A.M.	
8:00 to 8:50	General hospitals: Number and classes maintained, objects and administration in general, personnel, reports and returns.
9:00 to 9:50	Demonstration of proper use of bed pan and comfort of patient during and after its use, disinfection of feces, urinals, disinfection of urine.
10:00 to 10:50	Camp hospitals: Object, when where and by whom established, personnel and equipment, administration, reports and returns.
P.M.	
1:00 to 1:50	Admission and distribution of patients in hospital, papers pertaining thereto. Property of patient and public property in his possession, how cared for.
2:00 to 2:50	Demonstration of gastric lavage tube and removal of stomach contents after a test meal. Discussion of procedure and its value in diagnosis and treatment.
3:00 to 3:50	Register, report and transfer cards: Correct method of completing and filing, n.c.o. to complete and hand in the following day at 8:00 A.M. three cases on form 52 and 52*a*.

Eighth Day

A.M.	
8:00 to 8:50	Clinical records of hospital patients, discuss cards handed in by n.c.o.
9:00 to 9:50	Demonstration of general and local anesthesia.
10:00 to 10:50	Anesthesia in surgery. General and local.
P.M.	
1:00 to 1:50	Report of sick and wounded: How prepared, and when required. Form 53, M.D. When required and when not to be used.

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2:00 to 2:50 Demonstration of operating room and instruments.
3:00 to 3:50 N.c.o. to have practical exercise in making sick and wounded cards and papers, to hand in specimen of work the following day at 8:00 A.M. Remainder of class: Ward visit. Signs and symptoms of disease and discussion of same. Emergencies: How to act, and when to call medical officer.

NINTH DAY

A.M.

8:00 to 8:50 Discussion of S & W papers handed in by n.c.o.'s company morning report, company sick book. Surgeon's morning report of sick. Ration return.
9:00 to 9:50 Demonstration of fractures and methods of treatment.
10:00 to 10:50 Treatment of fractures: Various splints, their special uses and methods of application. Value of X-ray and anesthesia in fracture cases.

P.M.

1:00 to 1:50 Hospital mess management: Subsistence, how obtained and issued.
2:00 to 2:50 Demonstrate use of hypodermic syringe, dangers, dosage. Dispensary: How to handle drugs, prescription files.
3:00 to 3:50 Military correspondence: Channels, model letters and indorsements for demonstration. Each student will write an official military letter, sending it through channels.

Schedule of four months garrison training for Field Hospital Companies and Ambulance Companies (see G.O. 17, 1913). This leads to an official certificate of proficiency.

MORNINGS: FIVE DAYS PER WEEK

7:00 to 10:00 Ambulance drill and field work for Ambulance Companies. Field hospital drill and field work for field hospitals.
10:00 to 10:50 Stables or care of trucks.
11:00 to 11:45 Mondays: Shelter tent drill. Tuesdays: Litter and bearer drill. Wednesdays: Ambulance litter drill. Thursdays: Company drill. Fridays: First aid.

AFTERNOONS: FIVE DAYS PER WEEK

	First month	Second month	Third month	Fourth month	Special course
1:00 to 1:50	Anatomy and physiology	Minor surgery and first aid	Personal and camp hygiene	Materia Medica and pharmacy.	Reading
2:00 to 2:50	Clerical work, elementary	Clerical work advanced	Materia medica and pharmacy	Ident. work, photography and finger printing	Writing and spelling
3:00 to 3:50	Duties of a soldier	Care of animals or trucks, equitation	Diet cooking	Nursing, incl. use of Med. Dept. appliances	Arithmetic
7:00 to 8:00	Lectures on general subjects, and on personal, garrison, field, and tropical hygiene.				

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Those unable to progress in any subject are placed in the special course during its period. The morning training is for everyone. The afternoon training is for those who do not hold a certificate of proficiency. Examinations are held monthly and those who are qualified pass to the next higher course.

After a man fails twice in any one course he is excused from that course, but continues in the special course until qualified there. In special cases where early education is extremely deficient, men are also excused from the special course after two failures.

The following are typical orders indicating the subjects considered in the course of training (see G.O. 17, 1913). They are selected without reference to chronological sequence. The text books used for "Instruction in Automobile Service" were those issued by the companies which sold the motor vehicle employed by the hospital.

MONDAYS AND WEDNESDAYS, 7:00 TO 11:45 A.M.

All hospital property to be left in camp and proceed with company transportation to a suitable location where the following exercises will occur:

One hour's company and litter drill, the protection from fire from enemy in assumed positions. Field problems in orientation, map reading, visibility, improvisation of the litter and travois, first aid, semaphore signalling for selected men, transmission of orders, both verbal and written, observation of a terrain for a stated time with a report of the objects seen, improvisation of wagons or trucks into ambulances, relay report carrying competitions, individual tent-pin driving contest, improvisation of cooking utensils, wagon or truck drill, uses of contents of Medical and Surgical Chests, the Medical and Surgical Chest, Supplementary, and the Sterilizer Chest. Some of these exercises will occur each day with a view of obtaining training in them all during the period.

Quizzes of men by noncommissioned officers.

TUESDAYS AND THURSDAYS, 7:00 TO 11:45 A.M.

March to a designated place in full field equipment, pitch the field hospital, admit and discharge six patients. Pitch a shelter tent camp for hospital personnel, make a careful inspection with everyone accompanying the inspector. Errors to be pointed out in detail. While the hospital is being erected the wagons or trucks to drill. Every officer and non-commissioned officer to be instructed in laying out the field hospital, also pitching tentage.

MONDAYS, TUESDAYS, WEDNESDAYS AND THURSDAYS, 1:00 TO 3:00 P.M.

Exercises in the following: Preparation of the soldier's pack, demonstration of various types of incinerators, disinfection of water, kinds of latrines in camp and on march and their care, first aid and bandaging, resuscitation, instruction in the use of the clinical thermometer, also in taking the pulse and respiration, a talk on flies and mosquitoes with demonstration of breeding, traps, bait, and means of prevention, demonstration of uses of personal equipment (each man to know the contents and uses of his belt or pouch) location of the principal arteries. Instruction will be given in trench warfare, the wounds caused by grenades, trench bombs, and cutting weapons, with the infections to be expected from the same and the means adopted for their prevention, the effects of irritant gases and the approved means of protection against them.

FRIDAY, THE ENTIRE DAY: A MEDICO-MILITARY PROBLEM

Saturdays, 10:00 A.M.: An inspection of all equipment for which each soldier is responsible.

COURSE OF INSTRUCTION FOR THE WEEK ENDING NOV. 11, 1916

A.M.

6:15 to 6:25	Setting-up exercises.
7.00 to 7:50	Squad, platoon and company drill.

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8:00 to 8:50	Anatomy and physiology.
9:00 to 9:50	Litter and ambulance drill.
10:00 to 10:50	Nursing and ward management.
11:00 to 11:45	School for chauffeurs, lecture, quiz.
P.M.	
1:00 to 1:50	Army Regulations, minor surgery, first aid, sterilization of water.
2:00 to 2:50	Bandaging, personal hygiene, disposal of waste, disease prevention and sanitation in the field.
3:00 to 3:50	Pack saddle and packing, escort wagon, ambulance and harness, care of animals, harness, and wagons in the field.
4:15	Stables.

SATURDAY

A.M.

9:00 Inspection: Personal, equipment and quarters.

The following instructions governed Field Hospital Company No. 1 for the week ending Nov. 18, 1916.

MONDAY, TUESDAY, WEDNESDAY AND THURSDAY

A.M.

7:30 to 10:30 Proceed from camp in full field equipment. Establish Field Hospital, prepare kitchen and wards for patients, instruction in use of equipment, striking and loading hospital. Each day, while hospital is being pitched, truck drill.

FRIDAY

7:30 to 8:20	Company drill.
8:30 to 9:20	Map reading.
9:30 to 10:20	Litter drill.

SATURDAY

Proceed to designated point with equipment "A." Pitch Field Hospital, admit and discharge six patients. Field inspection of command followed by a review.

The following special instructions were given drivers daily, except Saturdays and Sundays and holidays:

11:00 A.M. to 11:45 A.M. School for chauffeurs, lecture, quiz and practical demonstrations comprising the following:

Internal-combustion engines. General principles, with special reference to four-cycle engines, starting, running, and stopping gasoline engines, lubrication and care. Compression, release, care and adjustment of valves, use of spark and throttle.

Ignition:	High-tension and low-tension systems.
Breaker box:	Care of points, care of magneto.
Spark plugs:	Adjustment of points, cleaning and care of.
Cooling system:	Cleaning and care of.
Clutch:	Principles, adjustment, care and use of.
Changing gears:	Universal joints, mechanism, lubrication and care of.
Differential:	Mechanism, lubrication.
Springs:	Care of.
Tires:	Changing, repair and care of.
Curtains:	Care of, washing and care of body and upholstery.
Stearing gear:	Mechanism and care of.
Storage battery:	Care of and connections.
Text-books:	Instruction for operating G.M.C. trucks.
	Instruction for operating White gasoline motor cars.
P.M.	
1:00 to 1:50	Army Regulations, minor surgery, first aid, sterilization of water, bandaging.

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2:00 to 2:50	Personal hygiene, disposal of wastes, disease prevention and sanitation in the field.
3:00 to 3:50	Monday: Use of wheel litter travois, travois improvisation, methods of carrying patient. Tuesday: Shelter tent drill. Wednesday: Litter drill. Thursday: Company drill. Friday: First aid.

The service calls of a field hospital conform to those of the camp of which the hospital is a part. If serving independently the following may be published for the information and guidance of all concerned:

	Week days	Sundays and holidays
First call	6:00 A.M.	6:30 A.M.
Reveille	6:10 A.M.	6:40 A.M.
Assembly	6:15 A.M.	6:45 A.M.
Mess, breakfast	6:30 A.M.	7:00 A.M.
Stables and fatigue	7:00 A.M.	7:35 A.M.
First call for drill	7:25 A.M.	
Assembly	7:30 A.M.	
Mess call, dinner	12:00 M.	All other calls
Drill, fatigue, school	1:00 P.M.	except drill
Recall from drill	2:00 P.M.	same as week
Stables and sick call	4:15 P.M.	days.
First call for guard mount	4:25 P.M.	
Assembly	4:30 P.M.	
First call for retreat	4:55 P.M.	
Assembly	5:00 P.M.	
Retreat	5:02 P.M.	
Mess call (supper) immediately after retreat	5:10 P.M.	
Tattoo	9:00 P.M.	
Call to quarters	9:45 P.M.	
Taps	10:00 P.M.	

Sentries will be posted at 6:00 P.M.

Such orders as the following were published as occasion indicated, when Field Hospital Company No. 1 and Ambulance Company No. 1 were serving together in a detached camp.

Memorandum:

1. The following Guard Orders are in effect for this Camp, this date. All orders for the Guard previously published are revoked.

2. The Guard will consist of an Officer of the Day, one Sergeant, one Musician, three privates from Field Hospital Company No. 1, one Sergeant, one Musician and three privates from Ambulance Company No. 1.

3. There will be 2 posts:

(*a*) Field Hospital Company Post.

(*b*) Ambulance Company Post.

The sentries for the Field Hospital Company Post will be taken from the Field Hospital, and those for the Ambulance Company will be taken

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from that organization. Each organization will make its own Guard Detail. The Officer of the Day will be detailed from these headquarters.

4. Special Orders for the Field Hospital Company Post:

To patrol around the wagon and truck parks and stables of the Field Hospital. To allow no unauthorized persons about my post, to prevent pilfering or thieving of any kind. To count the animals, to assist any that may become entangled, and to awaken the Sergeant of the Guard if any animals get away from my post or are in danger, allow no one to take animals away from the stables without proper authority. I am to quit my post only to awaken the Sergeant of the Guard.

5. Special Orders for the Ambulance Company Post:

As prescribed by the Commanding Officer of Ambulance Company No. 1.

6. The Manual of Interior Guard Duty will be strictly complied with.

The Sergeant of each Guard will post his sentries in compliance with the M.I.G.D.

7. The Officer of the Day will make at least one inspection of the Guard between the hours of 12:00 P.M. and daylight.

8. The Musician will procure the correct time from the Adjutant, blow such calls as he may direct and act as orderly for headquarters.

Regulations governing the personnel of the Field Hospital are similar to those for the Ambulance Company given in the chapter on that subject. Those governing its ward service may be adapted from those of the Camp Hospital.

MILITARY SKETCHING AND MAP READING

By Lt. Col. Wm. W. Reno, M. C., U. S. Army

The ability to read maps is an absolutely essential qualification of a medical officer. Instructions conveyed to him in the field often contain references to maps. If he is unable to understand these references his efficiency is greatly impaired. Then, too, the question of shelter and cover from fire at distance points where it might be desirable to establish sanitary formations can often be determined by reference to maps.

As the shortest road to map reading is through map making the essentials of map making will be outlined. Ordinarily in two afternoons the general principles of map making can be mastered. With these principles understood the essentials of map reading have been absorbed unconsciously.

Articles needed for Map Making.—(1) Compass; (2) Alidade; (3) Slope board; (4) Tripod; (5) Paper; (6) Four thumb tacks; (7) Pencil with eraser; (8) A pace tallier is convenient but not essential; (9) A list of pace scales for paces from 28 inches to 36 inches—convenient but not essential.

Procedure.—1. *Determine your normal step or pace* and mark it on your alidade as follows: Walk four times over a measured ½-mile course, counting the number of your steps each time. Add together and divide by four

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to get your average number of steps or paces per ½ mile. There are 31,680 inches in ½ mile. Divide this by the above average. This gives the

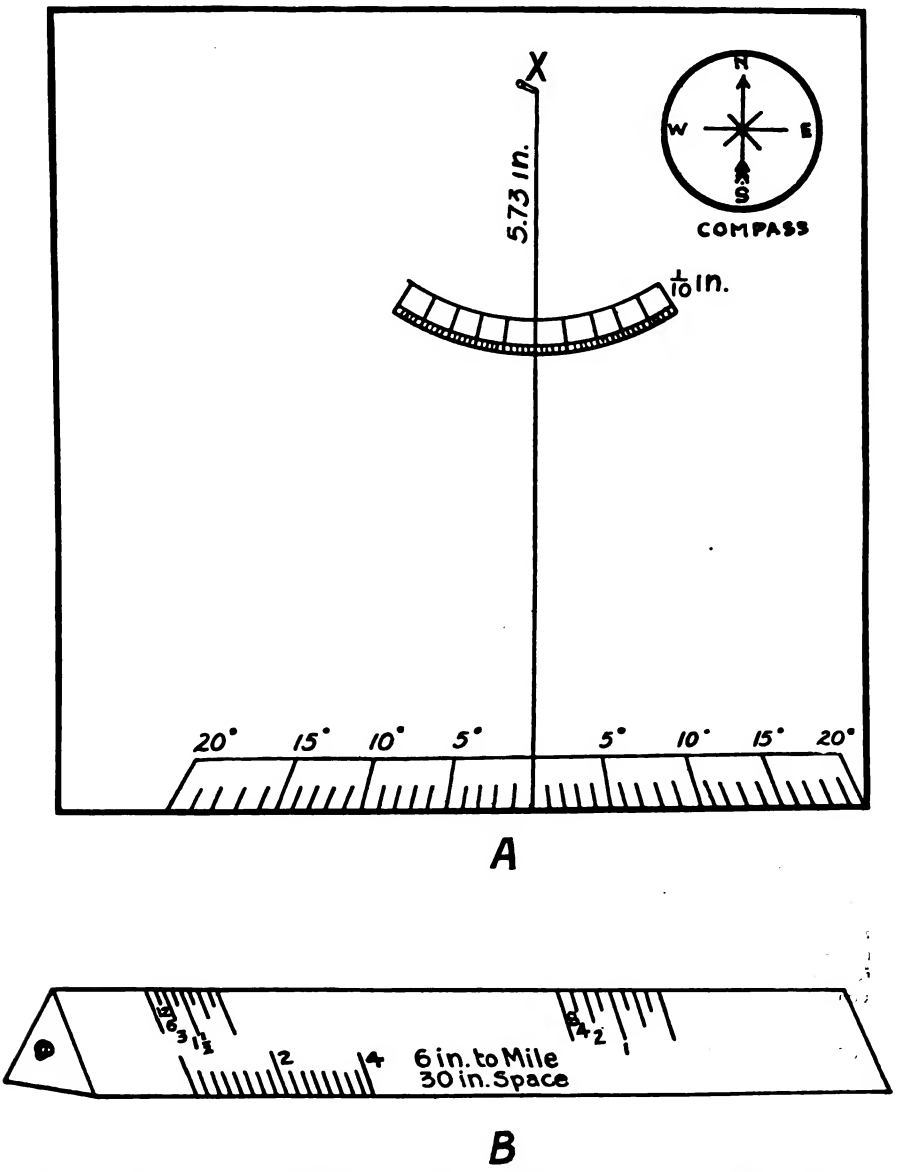

FIG. 3.—(*a*) This is merely a piece of a 1″ by 12″ board with angles of slope marked upon it. With a plumb bob and line attached at X and sighting at an object over the top of the board the angle of elevation of the object in registered by the plumb line. Knowing this angle and the distance to the object the elevation of the object can be ascertained readily from degree scales on the alidade. (*b*) The alidade is a triangular ruler used for sighting at objects and drawing lines (rays) on the map. It also has on its faces your pace scale, degree scales, an inch scale and hundred yard scales.

length of your pace in inches. All sketches made should be on the 6-inch-equals-1-mile scale. Locate your pace on the list of scales furnished and

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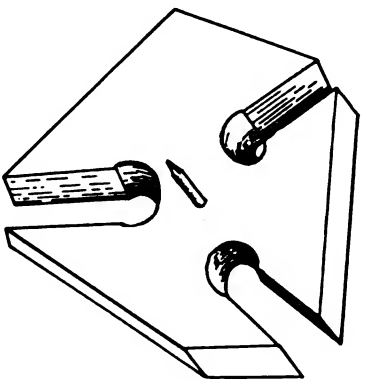
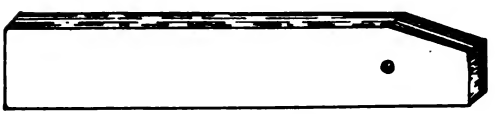
mark a corresponding scale on blank side of alidade. This scale of your paces is necessary in order to step off distances and place them on your sketch.

2. *Make your slope board and tripod.* Take a piece of 1- by 12-inch lumber about 1 foot long for your board (see Fig. 3). For tripod take three slender strips of wood about 4 feet long for legs and attach them to a block of wood for the head piece, legs being placed into slots with nails through them in order to hinge them. Through the center of the head piece, from



HEAD PIECE



1 in. x 1 in. x 4 ft

LEG

FIG. 4.—The tripod is easily made. Take a six inch piece of 2" × 4" or preferably 2" × 6" piece of lumber. Slot it at three places for legs. Take four strips of board about 1" × 1" × 4' for legs. With nails fasten them into the slots. Drive a nail through the slotted piece from the bottom projecting through the top one-half inch. Make a nail hole three-fourths inch deep in the bottom centre of map board. Place nail in this hole and tripod and board are ready for setting up.

the bottom, drive a nail projecting through the upper side about ½ inch. Place a corresponding hole in the center of the bottom of your map or slope board. This gives a pivot for your map board on the tripod (see Fig. 2).

3. *Mark degree scale on slope board.* Have one edge perfectly straight. Draw a line perpendicular to this on face of board. On this line draw an arc of a circle with a 5.73-inch radius, arc to extend about 3 inches on each side of perpendicular and center of circle to be on the perpendicular about ¼ inch from straight edge mentioned. Mark dots on this arc $\frac{1}{10}$ inch apart, beginning at perpendicular and going both ways. Drive a pin into the circle center. Tie a thread 15 or 16 inches long to the pin. Draw thread

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taut covering perpendicular. Move it either way still taut until it covers a $\frac{1}{10}$-inch dot. Then place a dot where thread crosses edge opposite the straight edge. Do this for fifteen or twenty dots on each side of the perpendicular.

At each dot so made draw a line $\frac{1}{4}$ inch long toward the circle center, except at every fifth dot make a line $\frac{1}{2}$ inch long. Number long lines five, ten, fifteen, etc., away on each side from the perpendicular as zero. This board is now a slope board for marking the degree of slope of hills, valleys and other objects (see Fig. 7). When the alidade or a piece of lead is tied to the thread mentioned, acting as a pendulum, and a sight is taken

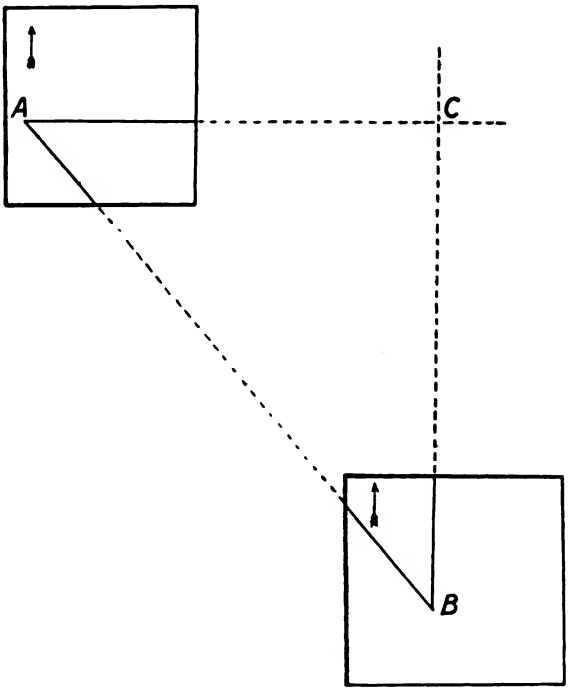

FIG. 5.—Location of a critical point by intersection. It is desired to locate point *C* on the ground at its proper place on the map. Set up map board at *A*. Orient. Shoot a ray at *B* and *C*. Pace to *B*. Lay off the distance *A B* on your map. Orient. Shoot a ray at *C*. Where the rays *A C* and *B C* cross is the proper place for *C* on the map.

along the straight edge of the board, the thread marks, on the edge opposite, the degree of slope of the hill, or other object sighted. Catch the thread at the proper point, by pressing it against the board with your finger. If the elevation where you stand is known or assumed, and the distance to the top of the hill is known, the elevation of the hill is readily calculated from degree scales on the alidade. The distance to the top of the hill can be readily ascertained by pacing, by intersection or resection—to be explained later.

4. *The compass and orientation.* The compass points to the magnetic north, which is in Greenland. The variation from true north is called

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declination of the needle; it can be readily ascertained by finding the true north, or from official maps. It is negligible in sketches. In order to make accurate sketches, every time the map board is on its tripod the board must be *oriented*, that is, set in such a manner that directions on the map and ground coincide. This is easily done by placing a compass on the board and having its needle in line with a line previously drawn upon the board. For convenience it is well to countersink a hole, compass-shaped, at one corner of board and draw an arrow which passes through the needle

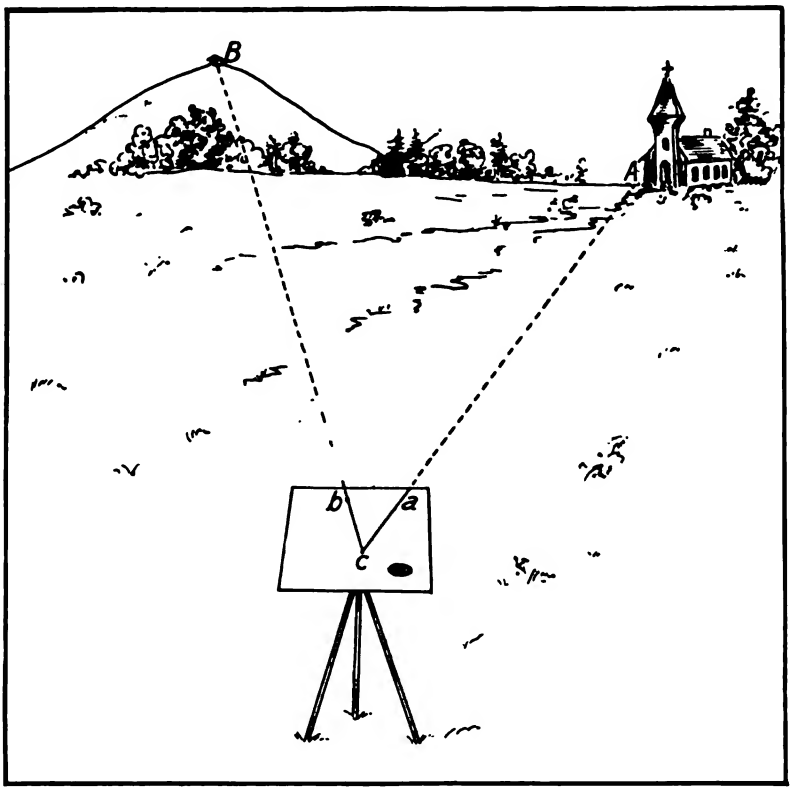

FIG. 6.—Location of a critical point by resection. This method locates on the map the point where you are standing on the ground. Two critical points visible on the ground must already be located on the map, say the church *A* and the house *B*. Orient your board. Pivot the alidade at (*a*) and sight at *A*, and standing at the rear of the map board draw a line along the alidade from (*a*) toward the body. Repeat this at (*b*). Where (*a*) (*c*) and (*b*) (*c*) cross locates on the map the point where you stand or point *C*.

pivot. Always have point of needle on this line, and its north point pointing toward arrow point. When this is done, map and ground directions always coincide.

5. *Critical points* are prominent points on the ground selected as points for exact location on the map. These points are located by pacing, by intersection, by resection. (*a*) *By pacing.*—Assume a starting point (mark it with a sharp pencil point) on your map—board oriented—with the map paper, and the country to be mapped, before you. From this point (call it *A*),

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draw a light line on the paper—called a ray—directly at the object (call it *B*), sighting across the top of your alidade, pivoting the alidade on the map point by means of a sharp pencil. Always have the alidade to the left of the pencil. Before the ray is drawn, look again at your needle, to insure that orientation is exact. If not exact, orient, and take a new sight across the alidade. Never draw a ray on the map without a final look at the orientation in order to insure accuracy. When this ray is drawn—a very light line, as it may be erased later—pick up board and tripod and pace to the critical point, counting steps. Lay off this distance on the ray, using the pace scale on your alidade. Erase all superfluous rays.

(*b*) *By intersection.* Say that point *C* is off to one side of *A* and *B*, and its location is desired. While at *A* shoot a ray at *C*— board oriented.

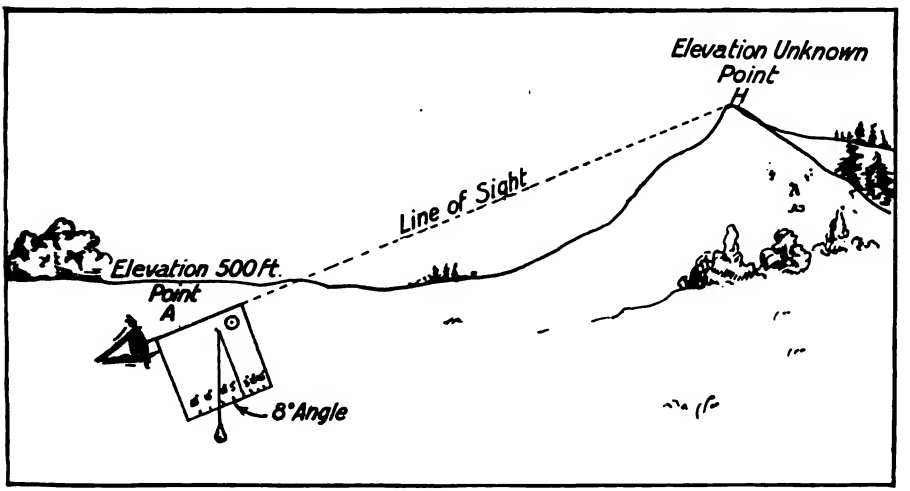

FIG. 7.—Determination of the elevation of any object. If not already known, assume an elevation for the point *A* where you stand. Sight with your map board at *H*, the point whose elevation is desired. The distance to *H* has already been determined by pacing, intersection or resection. Say the angle of sight is 8 degrees. From the alidade the elevation of *H* is easily determined. In explanation on page 140 height of *A* is 500 feet.

When at *B* shoot a ray at *C*—board oriented. Point *C* is where these two rays intersect. Make a sharp point there. Mark it *C* and erase these—and all "dead" rays (rays no longer needed)—in order not to clutter up the map with useless lines (see Fig. 5).

(*c*) *By resection.* Often it is desirable to locate on the map the point where you stand on the ground. Say you are on the ground at point *C*. Orient your board. Pivot the alidade on point *A* on the map, sighting at point *A* on the ground. Draw a line from point *A* on the map, toward your body. Do the same at point *B* on the map. Where the two lines cross is point *D*. Mark this and all critical points when found, with a sharp pencil point (see Fig. 6).

6. *Determination of elevations.* If it is unknown, assume an elevation for your starting point. Call this for example point *A*, elevation 500 feet. It is desired to get the elevation of point *H*. Point *H* has already been

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located on the map—by one of the three methods mentioned, pacing, intersection or resection. While at *A* get the angle of elevation of *H*. Say it is 8 degrees. Find the 8-degree scale on your alidade. Every time the distance for 8 degrees on the scale goes into the distance between points *A* and *H* on the map is a rise of 10 feet on a 6-inch-to-the-mile map. Say the map distance *A–H* is ten 8-degree distances. Then point *H* is 80 feet higher than point *A*. Then the elevation of *H* is 580 feet. Of course if *H* is lower than *A*, it is 80 feet lower, and its elevation is 420 feet (see Fig. 7).

7. *Contours* are lines cut on the earth's surface, by imaginary horizontal planes at equal intervals from each other. They are needed on flat maps in order to show the elevation and shape, of hills and valleys. All points on a contour line are equal elevation. Where contours are equally spaced the slope is uniform. Contours close to each other indicate a steep hill; far apart, gentle slope. Contour lines pass obtusely around slopes and acutely up streams or dry water courses. When locating the elevation of a critical point from another point, note the slope of the land, and, for every intermediate contour indicated, place a dot. Do this regularly. When the location and elevations of all critical points are determined, dot between them where contours would pass, connect all dots of equal elevation, and your map is contoured. It should then give an accurate reproduction of the land mapped.

8. *Scales.* In U. S. Army field sketches the *normal system of scales* is used. This means that the distance between contours called V.I. (vertical interval) varies regularly according to the scale of the map. For 1 inch on the map paper equals 1 mile on the ground map, the V.I. is 60 feet. For 3 inches equal 1 mile the vertical interval is 20 feet, for a 6-inch map, 10 feet, etc. Divide 60 by the scale of the map for the V.I. This normal system is necessary in order to use the same degree scale for various-sized maps. The distances on the degree scales on the alidade are naturally smaller the greater the angle. Those distances are called *map distances between contours* or M.D.'s. The M.D. for 1 degree is 0.65 inch. All other M.D.'s can be derived from this if no alidade is at hand. A *pace scale* is necessary in order to have a handy means of measurement of ground distances, readily convertible into distances from the map. *Animal scale* is the pace scale applied to a riding horse. The time the animal goes fixed distances at a walk or trot is used, however, instead of the length of its pace.

9. *Base line.* Any paced distance is a base line. A line is absolutely necessary in starting a map, before points can be located by intersection. Two critical points visible at the point to be resected and correctly located on the map are always necessary before a point can be located by resection. In intersection and resection the angle between the rays at the critical point being located, must never be less than 30 degrees or greater than 100 degrees as otherwise the rays are so nearly parallel that great error is possible.

10. *Conventional signs* are certain abbreviations or marks used in mapping to avoid writing out words—a map shorthand, as it were. They are very simple and are usually self-explanatory.

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11. There are four types of sketches; road, position, outpost and place sketches. (*a*) *The road sketch* is a sketch of a road and an area extending about 400 yards on each side of it. As a rule all details needed can be obtained from high places in the road. It may be necessary at times to go to high places near the road. Bridges, fords, ferries, houses, woods, cultivated fields, nature of crops and soil, villages, high hills, valleys, streams and other points of importance are noted on the sketch. Note these objects in all sketches when possible. (*b*) The *position sketch* is an area sketch where the sketcher can visit, if desired, any point in the area to be sketched. (*c*) *In the outpost sketch* the observer can visit only the land in the rear of his outpost. (*d*) *The place sketch* is made but from one point of observation as in a tree or on a high hill. In this sketch the observer must estimate distances. Sizes of known objects assist greatly in estimating distances. Distances between telegraph and telephone poles are also of great value.

12. Say that ten men are mapping the same area, all having a different pace but mapping on 6-inch scale. When the maps are completed all similar distances should measure exactly the same on every map. Contours should look approximately alike.

13. *Sketching without special equipment.* Articles needed; a watch, a piece of paper, pencil and a flat surface for holding the paper. Determine your pace and place it on a piece of paper on a 6-inch scale. If you haven't this scale at hand devise one. Means are readily at hand everywhere. Each time you set up to work on your map, orient your map paper by means of your watch as follows: point the hour hand at the sun. Midway between the hour hand and twelve o'clock is the North and South line. The position of the sun will tell you which end is North. To get the hour hand pointing directly at the sun hold a match or other straight slender object so that its shadow falls across the face of the watch. Place the hour hand, pointing at the sun directly in this shadow. Now proceed to make your map by pacing, intersection and resection. Make a slope board on your flat surface and improvise a tripod and alidade if elevations are desired. Degrees of slope are readily placed on the alidade by remembering that 0.65 inch is the M.D. for a 1-degree slope; half that for a 2-degree slope, etc.

14. The boundary of any map sketched is made by connecting outermost critical points by straight lines.

15. When a sketch is completed the following data should be placed upon it:

(*a*) Name, rank and organization of sketcher.

(*b*) Date of sketch.

(*c*) Location of sketch.

(*d*) Map scale, and arrow pointing to the magnetic North.

(*e*) Elevation in figures of critical points if elevations are taken. Also contours.

(*f*) A careful outline of water courses and dry runs.

Map Reading.—As the principles of map making can be learned in a few hours it is always advisable to learn map making before map reading.

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When the anatomy of the map is mastered map reading is simple. Be sure to master hill slopes in degrees so that by looking at the map you can say, "That is an 8-degree hill," "a 5-degree," or whatever it is. This is of great value in determining whether the hill, ravine or what not gives protection from rifle or artillery fire. Slopes of fall of bullets and shells should be learned in order to complete this valuable information.

The following are the consecutive points considered in solving sanitary map problems. Read the problem very carefully.

1. Commander's mission.
   (*a*) His orders.
   (*b*) What follows from these.
2. Mission of chief of sanitary force under consideration.
3. Information in regard to enemy.
   (*a*) Strength.
   (*b*) Position.
   (*c*) Movements.
   (*d*) Probable intention.
4. Information in regard to our own forces.
   (*a*) Strength.
   (*b*) Position.
   (*c*) Supporting troops.
   (*d*) Movements.
   (*e*) Actions independent of, or in conjunction with other troops.
   (*f*) Intentions.
5. Sanitary forces available.
   (*a*) Size.
   (*b*) Transport.
   (*c*) Location.
   (*d*) Sufficiency.
6. Probable location of greatest number of casualties.
7. Terrain.
8. Time.
9. Distance.
10. Weather and climatic conditions.
11. Comparison of courses open to you with advantages and disadvantages of each.
12. Decision.
    (*a*) Clear, concise, definite.
    (*b*) Make your plan simple.

GENERAL CONSIDERATIONS OF PITCHING ARMY TENTAGE

Par. 799, Infantry Drill Regulations, as amended July 8, 1915, and Par. 260, Sanitary Troops Drill Manual, outline a single method for pitching all army tentage, except the conical wall and shelter tents. This makes the method applicable to pyramidal, small pyramidal, small wall, hospital, ward and storage tents. In this drill, a detailed description of each movement in pitching tentage is purposely omitted for brevity and in order to give general instructions only.

In order to secure uniformity of action and equal distribution of work, and also in order to gain speed, the following amplification (the use of which is permitted by the War Department) is recommended by Colonel Reno.

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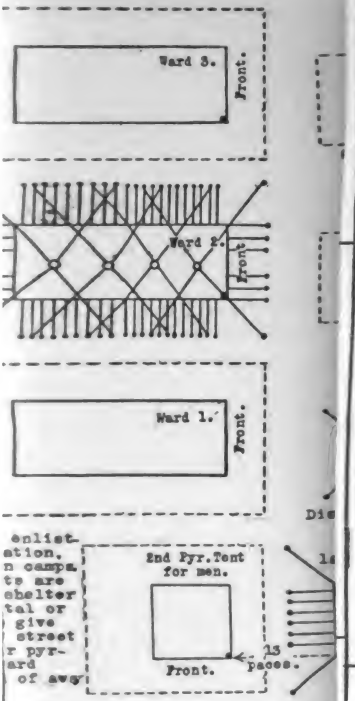

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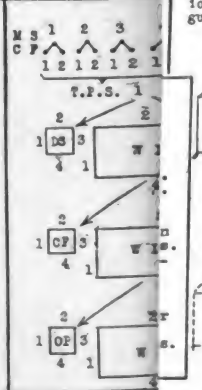

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Fig. 8.

PITCHING AND STRIKING AT NIGHT.

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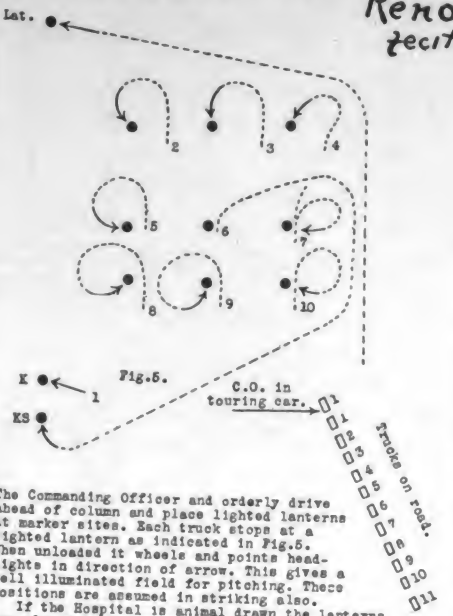

Fig.5.

The Commanding Officer and orderly drive ahead of column and place lighted lanterns at marker sites. Each truck stops at a lighted lantern as indicated in Fig.5. When unloaded it wheels and points headlights in direction of arrow. This gives a well illuminated field for pitching. These positions are assumed in striking also.

If the Hospital is animal drawn the lanterns are placed as indicated, but the wagons stop as shown in Fig.4. The additional lanterns belonging to the field hospital are now lighted and placed wherever needed.

FOLDING: For HT, W & wall tents, except that final folds for HT & wall tents are from both ends & tie by 2 interior guys.

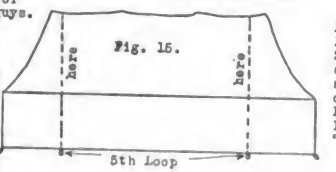

Fig. 15.

Fig.15. FOLDING: 1ST STEP. Draw tent away from tent site until taut on 2 corner pins. Fold ends to lines marked "here".

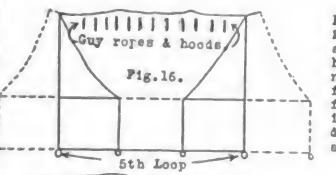

Fig.16.

Fig.16. 2ND STEP. Place all guy ropes & hoods on tent near apex. Fold from apex in 2 ft. folds until in a long, slender rectangle about 2' x 30'.

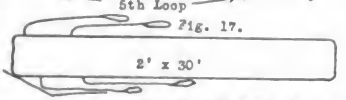

Fig. 17.

Fig.17. 3RD STEP. Roll tightly from one end and tie at other with 4 guy ropes around circumference.

18.

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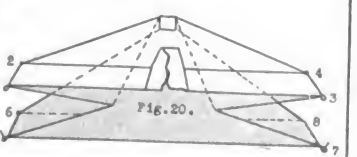

Fig.20.

FOLDING PYRAMIDAL TENT: Draw tent taut on 2 corner wall pins. Carry 1 - 2 over to 7 - 8. Return & cover 5 - 6, smoothing out folds. Now carry 3 - 4 to 5 - 6, return & cover 7 - 8, smoothing door & any folds. This makes tent bellows - shaped. All this time the metal square at apex is held taut & perpendicular on the ground. Now place hood in apex square & fold from top to bottom in apex-square-width folds. Then fold from each end & tie with 2 interior guys, fully slackened.

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1. As the distance between corner wall pins and corner guy pins is, by this amplification, measured by a guy pin which is exactly 2 feet long, the tent is always pitched with mathematical accuracy. This amplification is readily learned as the next movement to be performed is always the logical one. The phrase "rectangular tentage" when employed describes all army tentage except the conical wall and shelter tents. This term is used in a description of the drill. The front of a rectangular tent is side 1. The sides are numbered in the direction the hands of a watch travel, side 2 being the right side of the tent, side 3 rear side, and side 4 the left side.

2. Four or eight men and a noncommissioned officer pitch all rectangular army tents. The four men are numbered 1, 2, 3, 4, each squad being two men. Each man or squad works on the side of the tent corresponding to his number, and drives or removes all pins and tightens or loosens all ropes on that side.

TO PITCH TENT

(*a*) Count fours or squads. At the command "pitch tents" No. 1 drives the right front corner wall pin while the others place tripod and upright (or ridge, etc.) on area and unroll tent. (For wall, hospital, ward, and storage tents, the uprights are inserted with bases at side 4; for pyramidal tents at side No. 1 with tripod in center.)

(*b*) No. 1 places right front corner wall loop over the driven pin and ties door. No. 3 ties rear door, if any.

(*c*) No. 4 pulls bottom of front wall taut and drives left front corner wall pin through corner loop, aligning it on front pins of other tents, if any.

(*d*) No. 2 draws side 2 taut and drives right rear corner pin through corner wall, making a right angle to front line.

(*e*) No. 3 pulls left rear corner taut and drives wall pin through corner wall loop. The tent is now on the ground pinned at its four corners.

(*f*) No. 1 at the right front corner drives corner guy pin No. 1 at a proper distance in a diagonal line of tent. Nos. 2, 3 and 4 do the same at their corners. (Distance of corner guy pin from corner wall pin, wall tent, small, and small pyramidal, 6 feet; pyramidal, 7 feet; wall, hospital and storage tents, 8 feet; ward, 11 feet. Measure with a guy pin, 2 feet long. Fasten guy ropes to these pins.)

(*g*) Each number now drives a wall pin through each remaining wall loop on his side. For ward, hospital, wall or storage tents, each wall pin on sides 1, 3 and 4 is driven at site of wall loop instead of through it for convenience in placing and raising uprights. Also the corner wall loops of these tents at corner wall pins 3 and 4 are now removed from the corner pins for the same reason. After tent is raised, these loops are placed over the pins.

(*h*) Each number now drives a guy pin at every point on his side where

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a guy rope, fully slackened, crosses an imaginary line extending from corner guy pin to corner guy pin, and attaches the proper guy rope to it.

(*i*) Adjust hood or fly (and storm guys, if any).

(*j*) Raise tent. (If it is desired to raise the tent quickly, raise just after the four corner guy pins are driven and guy ropes placed over them. The remaining pins can be driven later. If, however, the tent is a ward or storage tent, drive guy pins opposite each interior upright for extra support before raising by this method.) Each number now goes to his side and tightens or loosens corner guys first, and then the others as directed by the noncommissioned officer, who thereby aligns upright, or uprights.

(*k*) Hood guys, if any, are now fastened.

TO STRIKE RECTANGULAR TENTAGE

Remove contents of tent. While the general is being sounded, loosen all the guy ropes on sides 1 and 4 only. Do not remove any guy ropes, loosen them only. (For tents of the ward or hospital type, remove all wall loops from pins on both sides 1, 3 and 4 also.) At the last note of the general, remove upright, or uprights. Where there is more than one upright, remove them through side 4. If one upright only, remove through the door on side 1. For pyramidal tents, remove all pins except the two rear corner wall pins, and for wall, ward, hospital or storage tents the corner wall pins on side 2.

TO FOLD RECTANGULAR TENTAGE

Pyramidal tents as per Par. 2, Bulletin No. 9, W.D., 1913. Tents of ward or wall type: Pull apex beyond side 2, until smoothly on the ground. Smooth out end triangles and fold them so that a rectangle is formed. Fold in 2-foot folds from apex until tent is in a long slender rectangle about 2 feet wide. Now fold from each end as with the pyramidal tent. This method of folding places the wall on the outside and thereby gives protection to the roof. If there is a fly, fold it in a long slender rectangle similar to the tent, place tent on it, and fold tent and fly together. For the ward tent, roll from one end only and tie with four guys instead of two. This gives a drum-shaped package easily handled.

SCHEME FOR LAYING OUT A FIELD HOSPITAL (RENO)

Select a site insuring sufficient frontage and depth.

Place marking pin (3-foot pointed iron rod with cloth marker at top or long tent pin) at point selected for right front corner wall pin of first hospital tent (store tent). Pace off 13 paces in straight line along front, and place marker for office tent. Pace off 13 paces, locate marker for operating tent. Align on other two markers by back sighting. Next turn at right angle to left, and locate marker for ward 3. Continue in straight

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line in same direction for 30 paces, locate marker for ward 6. Align this pin by back sighting on markers 3 and 4.

Next pace 13 paces to left at right angle and locate temporarily marker for ward 5. Walk without pacing to marker for office tent, face toward rear and pace off 13 paces in line with provisionally placed marker. Locate marker for ward 2, aligning with other pins from front to rear. Now pace off 30 paces and fix permanently marker for ward tent 5. Align from front to rear. Pace off 13 paces and locate marker for ward 4 by back sighting along back row of pins. Marker for ward 1 is next placed by assistant, being accurately located by aligning on pins for wards 2 and 3 as well as on pins for store tent and ward 4. Wagons may now be driven up, tentage unloaded at proper places and pitched as indicated in Drill Manual for Sanitary Troops.

If desired to pitch pyramidal tents pace off 13 paces along front line to the right from the store tent. Locate left front corner wall pin for first tent, marker for second. Tent is placed on same frontage as front line of ward tents. Remaining tents are placed on line from front to rear at 13-pace intervals. Kitchen is placed 30 paces to the front on the line of pyramidal tents. Tents for the commissioned officers (3 tents) are placed 30 paces farther to front, facing the hospital. Left tent on line with kitchen and spaced at 7 paces. Latrines, baths, etc., located as directed in Drill Manual for Sanitary Troops.

The following describes the procedure to be followed by a field hospital when ordered to proceed by rail to a certain point and thence by marching to another.

Maps should be obtained either from the Geological Survey, Washington, D. C. or elsewhere, for the territory to be traversed by marching.

Full field equipment consisting of the articles enumerated in the chapter on the regimental medical service should be prescribed for every man. The surplus kits should be shipped by rail, with other class "B" equipment, to the terminus of the railway journey. No overcoats should be taken unless necessary.

The following class "B" equipment should be collected for shipment by rail: Cots for every officer and man of the command, surplus kits, pyramidal tents complete, mosquito bars, the personal effects and other equipment authorized in Par. 1, G.O. 85, W.D., 1914, or later orders.

An estimate of funds such as the following, should be sent to the Department Commander:

Regular supplies	$175.00
Barracks and quarters	$150.00
Army transportation	$125.00
Incidental expenses	$175.00
Total	$625.00

The following expenditures could be made under these headings:
Under regular supplies: fuel. Incidental: telephone and necessary

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veterinary service. Transportation: repair of harness and wagons, bridge and ferry tolls. Barracks and quarters: camp sites. Water and sewers: water for men and animals.

If approved, the C.O. of the hospital receives:

An invoice of funds transferred. Blank checks and duplicate drafts for same. A check symbol number. Instructions as to the use and final disposition of funds.

The U.S. Treasurer forwards ten blanks for the official signature of the quartermaster, which should be certified to by an officer known to the treasury officials; in this case the post quartermaster.

The blank forms to be used on the march include: Vouchers for services, vouchers for purchases, bills of lading (original and memorandum), blank transportation requests.

The itinerary for marching should give distances of from 10 to 20 miles daily, the troops resting on Sundays. The distance outlined for each day's march may be governed largely by the necessity of locating the camp site near a suitable water supply.

The quartermaster at the point of departure should be furnished with a copy of the approved itinerary, the order directing the movement, a statement of the forage and rations needed at each supply point, the probable weight of class "B" equipment to be shipped by rail and the probable number of officers and men, and the amount of impedimenta to be shipped from the point of commencement of the railway journey.

The railroad equipment which would be required is enumerated in Par. 881, M.M.D. This applies to animal-drawn field hospitals. A motorized field hospital would require the following:

Two sixteen-section pullman cars, 1 baggage car, 7 flat cars, 2 box freight cars.

Before leaving, all class "B" equipment intended for use should be invoiced to the local quartermaster for shipment by rail. Class "B" equipment as defined in G.O. 85, W.D., 1914, is that equipment additional to class "A" which is prescribed for use of troops in mobilization, concentration, instruction and maneuver camps. In general it is such equipment as pyramidal tents for officers and men, cots, extra bedding and clothing and such other articles as are necessary or desirable when a prolonged stay is made in one place, including surplus kits, paulins for shelter of forage and animals, some athletic goods, as base balls, bats, etc., stable brooms, rakes, shovels, Sibley stoves, etc. All barrack, stable and other property belonging to the unit left at its point of departure should be packed in boxes suitably labeled and turned over to the local quartermaster. All buildings, company areas, etc. should be thoroughly policed before departure.

A suitable march order, prescribing hours for calls, sanitary precautions and care of animals enroute should be published.

For short journeys, the wagons should be loaded at one end of a train of flat cars (not over the sides of the cars) using two 20-foot, 3 × 12

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planks, with a 2 × 4 guide on outer edge, as a ramp for the wheels. A team of mules and a block and tackle furnish ample power. Two men should roll each vehicle to its proper place. The intervals between cars should be covered by steel plates, borrowed perhaps from the freight depot. Another detail of men should remove and secure tongues, wagon covers and wagon boxes and set brakes. Each set of harness should be placed in its proper vehicle in gunny sacks. A detail of six men should secure the vehicles to the cars by nailing 2 × 4s and 4 × 4s at proper places, as follows: Six pieces of 4 × 4, 18 inches long; and one 2 × 4, 6 feet long should be used to each wagon. A 4 × 4 should be nailed snugly in front of each front and back of each hind wheel; pieces of 4 × 4 should be placed on the outside of each hind wheel, and the 2 × 4 × 6 run between spokes of this wheel and nailed. This 2 × 4 rests on the wheel rim. A guard should be placed on these cars. Stalls should be made for the private animals in one stock car, by running a 2 × 4 from floor to ceiling in the center at each end of the car and nailing 1 × 12 lumber thereto. This makes stall room for four animals to stand lengthwise of the car. The fifth horse can stand in the center of the car, after this work is completed, the train should be partially made up near the stock yards with the stock cars at the stock ramps. The baggage car is so placed that it can be loaded easily. The animals should be watered and loaded up a ramp.

For long journeys Bulletin 66, Hdq. S.D., July 10, 1917, publishing instructions from the Adjutant General of the Army prescribes the following procedure:

Where a long journey is involved and the wagon transportation is not required immediately upon arrival of troops at destination, escort wagons and other wagon transportation accompanying troops on train journeys should be shipped knocked down. This action is desired because of the railroad car shortage, as ordinarily, escort wagons with troop movements are set up and loaded three to a car, while if knocked down, they can be loaded approximately thirty-six to a car. Another item that enters into consideration is the cost of transportation and shipping these escort wagons and other wagon transportation knocked down will result in a great saving to the government in the cost of transportation. Paragraph 193, Handbook of Transportation by Rail and Commercial Vessels, fully explains how wagons can be shipped knocked down, and this paragraph is quoted for ready information:

'Remove the beds from the running gears and take off the rear gates. Get a 36 foot flat car or even a larger one. Place the first bed in one corner of the car (its length parallel to the car) so that its side walls will come out to the stakes or places for stakes on side of car. Take the second bed, reverse it so that the front end shall be opposite rear end of first wagon, turn it bottom up, and place it partly inside and partly outside the first bed, the inner sides being close together. This arrangement forms a box, with closed ends, which can be filled with parts of the body and running gear. Place the third and fourth beds, similarly arranged, alongside the first and second,

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and continue the same arrangement to the other end of the car. In this way 12 beds can be put in first layer on the car.

Arrange the second, third and fourth layers similarly, and secure the beds by stout stakes and wire. Forty-eight beds, with parts, can thus be shipped on one flat car, the running gears being placed in a box car. Put back all nuts in proper place. Wagons that have been used should never have the bodies knocked down and loaded in box cars, because in endeavoring to take off the nuts, which are sure to be rusted, the outside braces and inside straps are twisted and the bolt ends broken off, rendering the wagons unserviceable. By loading as above described, no damage is done the bed or running gear and the wagons are easily set up when destination is reached. It is not necessary to number the beds, running gear, etc., except when wagons of different patterns are shipped. If tunnels are on the line of road or clearance is limited for any other reason, load only three layers, or 36 wagons on each car."

Horses and mules should be loaded into separate cars. If possible all cars should be loaded at the same time. These cars should have been sanded by the railway company. This is necessary in order to prevent the animals falling down with the lurching of the car when in transit. The day before departure the quartermaster should notify the ticket agent of the number of tickets necessary in order that he could have time to prepare them. All cars should be inspected and assignment of seats made. After the baggage and animals are loaded, the personnel entrain in the tourist sleepers, enlisted men, three to a section, and officers one to a section in a space curtained off in the rear sleeper. When the train is completely made up the quartermaster turns it over to the yardmaster. During a rail trip the animals should be watered and fed hay and oats twice daily.

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CHAPTER VI

THE CAMP HOSPITAL

The following notes concerning camp hospitals were collated by Lieut. Jas. S. Simmons, M.C. They are based upon his experiences in Camp Hospital No. 1, organized by Major J. Heysinger, Med. Corps, U.S.A. at El Paso, Texas, 1916.

"A Camp Hospital is an immobile unit organized and equipped for use in camps where the care of sick would otherwise result in the immobilization of field hospitals or other sanitary formations pertaining to organizations.

Department Surgeons, Division Surgeons and other administrative officers charged with providing for the sick and wounded under field conditions prevent the immobilization of sanitary formations pertaining to organizations by providing for the establishment of camp hospitals where necessary."

The equipment and personnel of a camp hospital vary with the requirements of the situation. A suitable camp hospital for one or two regiments may be formed with regimental hospital equipment, less transportation (Par. 869 and 872 M.M.D.) as a nucleus. A camp hospital for a brigade or a larger organization may utilize the equipment of a field hospital (Par. 879 M.M.D. only) as a nucleus. In paragraph 886 M.M.D. will be found a list of supplemental supplies for the equipment of camp hospitals, more or less of which will be necessary according to the conditions which are to be met (see Par. 859, M.M.D.).

A camp hospital is under the control of the senior medical officer on the staff of the camp commander and is administered by him or by one of his subordinates."

The term "Camp Hospital" is therefore quite an elastic one and may be applied to any immobile hospital unit, organized for use in camps, varying in size from a unit using a regimental hospital equipment as a nucleus, to one utilizing the equipment of a field hospital.

The size of the camp hospital and the amount of the equipment will also be influenced greatly by its location in relation to a base hospital. In case it is located comparatively near such a unit, all serious cases requiring special treatment, both medical and surgical, are transferred immediately; but if the camp hospital is at a considerable distance, a larger proportion of the more serious cases will be cared for there instead of being transferred, and in this case the extra equipment necessary for treating this class of patients will be added to the original equipment.

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For the sake of convenience throughout this chapter, the term camp hospital will be understood as applying to a hospital of 208 beds, such as the camp hospital established at Fort Bliss, Texas, September 1, 1916, in compliance with General Order No. 19 and General Order No. 34, El Paso District.

HOSPITAL BUILDINGS

The following buildings were in use in this hospital:

Eight ward tents (each having a capacity of 26 beds) numbered 1 to 8 incl.
One office building (wood).
Laboratory and Operating Room (wood).
One Receiving Ward and Dispensary (large wall tent).
One Officer of the Day tent (large pyramidal tent).
One store room (two wall tents, large, with fly).
One Dental office (large pyramidal tent).
One mess hall and kitchen (wooden building).
Eight tents for Privates, Med. Dept. (large pyramidal tents).
Three tents for Noncommissioned Officers (small wall tents).

Three latrine covers:
- Officers, Med. Corps & Enl. men., Med. Dept., separated by a partition.
- Venereal patients.
- All others.

Two bath houses:
- One for enlisted men (with section for officers).
- One for patients only.

The Commanding Officer of the hospital took charge of all the correspondence and the various rosters of service, made, published and verified all orders, and kept all records of the hospital, including clinical histories.

He acted as Commanding Officer of the Detachment of Patients and was in charge of all records, accounts and property pertaining thereto. He was responsible for the safekeeping of all money and valuables belonging to patients in the hospital.

He had charge of all public property, supplies and funds, the construction and repair of buildings, transportation, outside police and care of grounds, laundry, disinfection, and baggage store room. These were under the immediate supervision of N.C.O.'s., who were responsible to the Commanding Officer. The issue of property necessary for the equipment of the different departments of the hospital was made on memorandum receipt to the responsible officer and all property was checked at least once a month. Upon transfer of responsibility, all losses and excesses were reported at once to the accountable officer.

He established and conducted a mess according to the principles outlined in Par. 231, M.M.D., 1916.

He was responsible for the management of the Hospital Fund.

He supplied to the different departments of the hospital such details of personnel as were necessary, and was responsible for the discipline, instruction, equipment and rationing of the detachment and the keeping of all records and accounts pertaining to its members.

The professional duties of the Commanding Officer were as follows:

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He acted as Chief of both the Medical and Surgical services, assigned the ward surgeons to their various duties, inspected all wards twice daily, and was called in to see patients as a consultant, by the ward surgeons, whenever necessary. The receiving ward was under his supervision.

The junior medical officers were assigned to duty as ward surgeons in the various wards, by the Commanding Officer.

Of the seven Lieutenants, M.C. on duty at the hospital, four were assigned to medical wards, one to the venereal wards, one to the surgical ward and another was given the laboratory and operating room service.

The ward surgeons and the officer in charge of the laboratory were held responsible for the professional care of the patients under them, for the condition of their wards and for the proper performance of the duties devolving upon the wardmasters and assistants assigned to duty in connection therewith.

The hours of duty for ward surgeons were from 9 A.M. to 4 P.M. daily, excepting Sundays and holidays, when the hours of duty were from 9 A.M. to noon. In case an officer wished to leave the hospital during duty hours, he reported verbally to the Commanding Officer for permission to leave.

Authority for use of the motor vehicles for the purpose of leaving the hospital during duty hours, was obtained only from the Commanding Officer. The schedule for transportation of officers to and from the hospital was as follows: 8 A.M. one ambulance, bringing officers to the hospital; 4 P.M. one ambulance taking officers to their quarters from the hospital.

The ward surgeons were required to see all patients as soon as possible after their admission, write a brief clinical history and make a physical examination using forms (55b-c-d-e and f M.D.) for recording findings, and order the treatment necessary. For the progress of the case (form 55g M.D.) was used. Treatment, report of operation, and report of laboratory findings were each made on the proper form (55*h* and 55*u*, M.D.) and attached to the history.

The following regulations were formulated for laboratory examinations and dressings:

1. All requests for laboratory examinations will be made out on the required blank forms, signed by the ward surgeons and sent to the laboratory by 10:00 A.M. each day.

2. Routine examinations for smears for gonococci will be rendered on the same blank form, not sending a new form to the laboratory for each examination.

3. Smears for gonococci should be made in every case of urethritis, the examination being repeated at weekly intervals if positive, and every three days if negative.

4. Specimens of urine, feces, sputa, etc., should be placed in covered containers and plainly marked with the patient's name and ward, the accompanying blank form indicating the examination desired.

5. Patients requiring daily dressings will be sent to the dressing room at the following hours:

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Ward No. 1	9:00 A.M.
Ward No. 2	9:30 A.M.
Ward No. 3	10:15 A.M.
Ward No. 4	10:45 A.M.
Ward No. 5	11:00 A.M.
Ward No. 6	11:15 A.M.
Ward No. 7	11:30 A.M.
Ward No. 8	11:30 A.M.

6. A list of names of patients requiring surgical treatment will be made by wardmasters and sent to the dressing room each morning before the patients arrive.

The officer in charge of the laboratory was directly responsible for all specimens examined and signed all reports made of examinations. As the same officer was in charge of the operating room, it was his duty to see personally all patients sent from the wards for dressings, and to perform all minor operations necessary, keeping a record of all such work.

The laboratory equipment used was that prescribed in Par. 886 M.M.D., and extra supplies were obtained from time to time, as needed, from the Medical Supply Depot.

The scope of laboratory work was performance of simple routine chemical and microscopic examinations.

1. Blood: Cytological examinations, presence of parasites, malaria, etc.

2. Urine—Chemical: Albumen, sugar, etc. Microscopic: Casts, blood, parasites, etc.

3. Feces—Microscopic: For parasites or ova.

4. Sputum—Microscopic: For tubercle bacilli, etc.

5. Pus or other fluids: For Bacteria, urethral smears for gonococci.

All specimens requiring either culture or complement fixation tests were sent to the Department Laboratory.

The following outline gives in a general way the types of specimens sent:

1. Blood: For complement fixation test. (Syphilis, gonorrhea, tuberculosis.) Sent in Wright's capsules or small test tubes.

2. Feces or urine: For culture or special examination, in sterile glass containers. (Feces for examination for ova should be mixed with an equal volume of 10 per cent. solution of formalin and shipped in sealed vials.)

3. Sputum, pus, etc.: For culture or culture autogenous vaccine, collected aseptically and sent in sterile sealed glass containers; throat cultures made upon Löffler's blood serum media and sent to the laboratory.

4. Stomach contents: Removed one hour after Ewald test breakfast, filtered and sent to the laboratory.

5. Solid tissues: Fixed in 10 per cent. formalin or 70 per cent. alcohol and forwarded in a sealed glass container; a short clinical history should accompany each specimen.

6. Negri bodies: Make smears by crushing a section of grey matter, ammon's horn or cerebellum, between slides. These smears should be fixed, while moist, in absolute ethyl alcohol and should be sent in 80 per cent. ethyl alcohol (not dried).

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X-ray: All patients requiring X-ray examinations were sent to the Base Hospital at 8:00 A.M. in the ambulance. The request made on Form 55/ and signed by the ward surgeon accompanied the patient.

The Officer of the Day was detailed from the roster of junior medical officers, in rotation, by the Commanding Officer, and was assigned to duty for a tour of 24 hours (from 9:00 A.M. until 9:00 A.M. the following day, or until relieved by the new Officer of the Day).

The duties of the Officer of the Day were similar to those given for that officer in the chapter on the Base Hospital.

The following details of enlisted men were made:

1 Sergeant, first class, in charge of property.
1 Sergeant in charge of hospital mess.
1 Sergeant in charge of sick and wounded records.
1 Sergeant (clerk).
1 Corporal in charge of wards, 2 Privates in each ward (acting as wardmaster and as assistant wardmaster).
1 Corporal in charge of outside police and (4 Privates, outside police).
5 Cooks, 3 assistant cooks who wash pots and pans.
4 Privates, dispensary.
2 Privates, receiving office.
2 Privates, night guard.
1 Private, orderly.
1 Private, clerk
3 Privates, Dressing room and Laboratory.
2 Privates, dental office.
2 Privates, property office.
2 Privates, 1 carpenter and 1 assistant carpenter.

Note.—The ambulance drivers and ambulances were detailed from the Ambulance companies in the vicinity.

The following orders were published and posted in conspicuous places about the Hospital (bulletin boards and wards).

1. The tour of the noncommissioned officer in charge of quarters will be for 24 hours, beginning at 9:00 A.M. and ending at 9:00 A.M. the following morning. He will remain constantly at the hospital until relieved by the new N.C.O. in charge of quarters.

2. After 5:00 P.M. the noncommissioned officer in charge of quarters will be in charge of wards and will be responsible that the proper discipline is maintained in the same. He will take check of the patients between 6:00 and 9:00 P.M. and between 9:00 and 11:00 P.M., at which time he will also take check of such members of the detachment as are under arrest or restricted to quarters. Result of check will be reported to the Officer of the Day each morning.

3. The noncommissioned officer in charge of quarters will make frequent rounds of the hospital and see that orders and regulations governing the hospital are enforced.

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4. Enlisted men under arrest or restricted to camp will report every hour between 5:00 and 9:00 P.M. to the n.c.o. in charge of quarters.

5. The night guard will be under the direction of the noncommissioned officer in charge of quarters. The detail for night guard will consist of two men who will be on duty from 7:00 P.M. until reveille.

6. One man will be constantly on post, the other remaining in the Receiving Office. Each man will walk post for one hour, taking not over thirty minutes to cover the hospital and signing his name on the report provided for that purpose.

7. The duties of the night men will be as follows:

(*a*) To carefully guard all property of the hospital.

(*b*) To prevent any unauthorized person from loitering around the hospital. After 10:00 P.M. they will question all persons found on their post and ascertain the reason for their presence.

(*c*) To watch carefully for the presence of fire, giving especial care to the straw pile, incinerator and sparks from stoves. If a fire is discovered, they will notify the Officer of the Day and the noncommissioned officer in charge of quarters, in the most expedient manner, and will try to extinguish the fire.

(*d*) In case the fire cannot be controlled by the detachment, the Officer of the Day will telephone for assistance.

The following orders were posted in wards:

1. The sides of ward tents will be raised from 8:00 A.M. until 10:00 A.M. daily, except Saturdays, when the weather is fine, and all blankets and bedding aired outside.

2. Mattresses will be turned daily and the straw changed every other Friday afternoon.

3. Windows must remain open day and night, except during rain or dust storms, when they may be closed temporarily.

4. On Friday afternoons the ward floors will be scrubbed, all cots, furniture and bedding removed to facilitate thorough cleaning. Stove pipes and spark arrestors will be cleaned out at this time.

5. During the prevalence of high winds, all stove fires will be extinguished. During the night all fires will be banked.

6. Because of the crowded condition of the wards, great care must be exercised to prevent contamination of the floors, walls, etc. by particles of food, spitting, dressings, etc.

7. No water is to be thrown upon the ground, outside wards, except wash water. The soiling of the ground by patients gargling, spitting, or throwing soiled dressings about is prohibited.

8. Patients will not be allowed to leave the vicinity of their wards, will not remain in the plaza or near the offices, and will not go outside the fence bordering the hospital grounds.

9. The ward streets are intended for patients' recreation grounds and patients are restricted to the wards and ward streets, except when going to and returning from the mess hall, toilet or dressing room.

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10. No patient will be allowed to leave his ward or ward street unless he wears a dressing gown properly fastened.

HOSPITAL REGULATIONS

In making rules for the internal administration of the hospital, the list given in the Manual for the Medical Department, 1916 (Par. 279) was followed almost literally, both for general and ward administration.

Instruction of the enlisted personnel should be given as directed in the Manual for the Medical Department, 1916. (Par. 167–180.)

REPORTS AND RECORDS

Reports were made both daily and monthly as required in M.M.D., 1916.

The following records were kept in addition to retained copies of reports:

1. Register of Sick and Wounded (Form 52).
2. Clinical records (Forms 55*a* to *u*).
3. Prescription files.
4. Register of Dental Patients (Form 79).
5. Correspondence Book and Document File.

The nature and quantity of supplies necessary for a Camp Hospital varies greatly depending upon the size and the location of the hospital in reference to the Base Hospital and Supply Depot. If removed from the Base Hospital, the allowance tables of a Post Hospital should be used, but otherwise the field allowance will be sufficient.

At a hospital caring for 208 patients the supply table allowance for a Field Hospital was found ample. Narcotics were not required in any considerable quantity. A few drugs such as ichthyol, brown mixture tablets, etc. were needed in larger quantities than those given in the supply table.

The supply of drugs used will be found in the tables given in the M.M.D., 1916, Par. 879, 886.

Three prescription files were kept:

1. Prescriptions for alcohol, alcoholic liquors, medicines containing opium or its derivatives, and the derivatives of coco leaves.

2. Prescriptions for civilians, excepting prescriptions for the articles in the first group.

3. All other prescriptions.

A record was kept of dispensary receipts and expenditures of articles specified in the files, and this record was balanced once a month. The quantities remaining on hand were verified by a medical officer. Alcohol, alcoholic liquors, active poisons and all habit-forming drugs were locked up.

The following is the list of property issued to each ward:

Atomizers, hand	1
Bags, rubber, h.w.	1
Bags, rubber, ice, for head	1
Basins, wash	2

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Bath robes	26
Bed sacks	26
Blankets, grey	78
Blankets, rubber	2
Buckets, G.I.	1
Chairs, folding	4
Chests, commode	2
Cots, G.M.	26
Crutches, pairs	1
Dippers	1
Files, Shannon	1
Pajama coats	26
Pajama pants	26
Cups, sputum	6
Tables, bedside, folding	4
Towels, bath	26
Towels, hand	26
Pillow sacks	26
Pillow slips cotton	52
Sheets, cotton	52
Thermometers, clinical	8
Water coolers	1
Stoves	2
Stoves, alcohol	1

All supplies were under the charge of the property sergeant.

All property was checked weekly and any shortage found reported to the Commanding Officer.

The following means of transportation were employed:

One small Ford truck and driver for mess.

One motorcycle and driver for messenger service.

Three motor ambulances. Used for bringing patients to hospital and returning them to duty.

All vehicles were under the order of the Commanding Officer who was assisted by the property sergeant. One driver was assigned to night duty in rotation. As the ambulances belonged to the various Ambulance Companies and were assigned to hospital daily, all repairs were made by their own companies.

Hospital Fund

Derived a
1. From commutation of rations of patients. Forty cents per capita per day (June 29, 1917).
2. From savings on rations of the enlisted men, Medical Dept.
3. From money received from officers using the hospital mess.

Care of b
The Commanding Officer of the hospital acted as custodian of the Hospital Fund and was personally responsible for the loss of any portion of it not deposited in a bank, or locked in the hospital safe. He also took proper care in expending the fund.

The mess hours for the patients and enlisted men of the Medical Dept. were as follows: Breakfast 7:00 A.M. Dinner: Noon. Supper: 5:00 P.M. Meals for the venereal patients were eaten in their wards, twenty

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minutes later than the schedule. All possible care was taken with the dishes, etc. to prevent the spread of disease by contamination.

The following diets were given patients when ordered by the ward surgeons.

1. Full diet: the full ration				
2. Light diet:	beef	potatoes	spinach	coffee
	veal	beans	bread	butter
	fish	cabbage	eggs	fruit
	pork	onions		
3. Semi-solid diet:	oatmeal	soft boiled eggs		puddings
	toast	milk		coffee
4. Liquid diet:	milk	gruels		broths
	soups	beef tea		albumen water
5. Special diet:	which was a combination of any ingredients of the first four.			

The food supplies for the hospital personnel and patients consisted of rations issued by the Supply Department and of articles purchased with the Hospital Fund.

The mess was under the immediate charge of a noncommissioned officer whose duty it was to receive and care for all articles of food for the mess. He had supervision of the cleanliness and discipline of the mess room, the service of meals therein, and the distribution of food to the wardmasters for patients confined in bed. A mess account was kept by the noncommissioned officer in charge, on Form 74 and inspected by the Commanding Officer.

A large ice box was provided for preserving perishable food.

Ice used both as an article of food, and for the preservation of food, was obtained from the Quartermaster, all in excess of the allowance being paid for out of the Hospital Fund.

Laundry: All laundry was done by a private company which held a contract with the Medical Supply Depot for this work. Vouchers were made for all laundry work on Form 330 a War Dept. and forwarded to the Medical Supply Depot through the Department Surgeon for payment. This voucher is an important document. The illustrated copy furnished should be used as a model in even its most minute details so far as form is concerned.

Admission of Patients. (*a*) *To Hospital.*—All patients applying for admission to the hospital were taken first to the receiving office for examination by the Officer of the Day and for admission in case he advised it. Here the Register Card was filled out as fully as possible from data available at the time and the ward to which the patient was assigned was noted on the back of the card.

A clinical record brief should be filled out (Form 55*a*) making two carbon copies, with the patient's name, rank, organization, etc., ward to which assigned and the diagnosis copied from the transfer card. The original of this card was sent to the wardmaster as authority for the patient's admission. One carbon copy of Form 55*a* was kept in the receiving ward as an index of the location of the patient in the hospital. The other copy was sent to the sick and wounded office for index. The transfer card was sent with

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Form 55*a* to the ward where it remained twenty-four hours and was then sent to the sick and wounded office.

(*b*) *To Wards.*—Before admission to wards all patients and their clothing were carefully examined for the presence of vermin. The following regulations governed the safekeeping of patient's effects:

1. Upon admission to the hospital, the wardmaster or his assistant (and at night, the noncommissioned officer on duty) prepared Form 75 Med. Dept. "Patient's property card" in duplicate.

2. This card was signed by the person preparing the same as also by the patient, the latter adding above his signature "The above is correct." If the patient was unable to sign, the Officer of the Day certified to the correctness of the card.

3. The clothes, properly tagged, were then turned in to the baggage room. The baggageman checked the list and if found correct, signed the property card. The duplicate card and check were then given to the patient.

4. When a patient received his clothing, he returned the duplicate card and check, and acknowledged receipt (over his signature) of the clothing, on the original property card, which was then kept on file in the baggage room for three months.

5. Clothing before being stored was carefully examined by the wardmaster, his assistant and the baggageman, for lice nits, and if any were found, the fact was reported immediately to the Officer of the Day, who issued the necessary orders to have the patient and clothing properly cleaned as directed by standing district orders.

Issues from store room, except in emergency, were made at 8 : 30 A.M.

Stores required were requested on issue slips, expendable or nonexpendable, as the case might be.

Careful medical histories were written on each case (using Forms 55*b* to *u*) omitting trivial facts having no bearing on the present illness. The authorized system of nomenclature of the M.M.D. 1916, was used as far as possible.

Ward surgeons stated in their diagnosis, whether the sickness came under the provisions of G.O. 31, W.D., 1912, G.O. 45, W.D., 1914, or was simply "Yes" or "No."

All diseases the result of the soldier's own misconduct, contracted prior to his current enlistment, do not come under the provisions of either G.O. 31 or G.O. 45 and are simply "No."

All diseases the result of the soldier's own misconduct, contracted during his current enlistment, when the latter began on or after April 27, 1914, come under the provisions of G.O. 45.

All diseases the result of the soldier's own misconduct, contracted during his current enlistment, when the latter began prior to April 27, 1914, come under the provisions of G.O. 31.

Under normal conditions, the cases treated in camp hospitals will be acute, of slight severity and will require only a short stay in the hospital.

Climate and seasonal changes influence greatly the type of cases ad-

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mitted. During the summer months, there is generally a great increase in gastro-intestinal disorders, while in the fall and winter the majority of the cases are suffering with acute respiratory diseases.

The venereal patients occupied two of the eight wards at Fort Bliss.

An average made from the records of 1880 cases at the camp hospital, Fort Bliss, shows that the length of stay, per man, was about ten days.

Patients were transferred from one ward to another when necessary, by the Commanding Officer, upon recommendation of the ward surgeon concerned and the transfer was reported to the receiving office.

All cases seriously ill or requiring special treatment and attention were transferred at once to the Base Hospital; as far as possible, they were transferred before 3 : 00 P.M. in order to arrive there during the duty hours of the hospital staff.

When transferring patients to the Base Hospital, the officer signing the accompanying transfer card ascertained by careful examination whether the diagnosis on the transfer card agreed with the patient's condition.

In doubtful cases, notation was made on transfer cards, under the diagnosis, stating what disease or injury was suspected, as measles, suspected, probable pneumonia, etc. Suggestion of some contagious disease "Tentative" diagnosis, only.

If considered necessary, the transferring officer telephoned the receiving office, Base Hospital, before the patient was sent over, giving the office any information which might be of assistance in making a full and proper diagnosis.

All patients when recovered were returned to duty upon order of the ward surgeon. He completed the clinical record and turned it in to the receiving office by 2 : 00 P.M. the day before the patient's discharge. Clothing belonging to patients to be discharged was given them and their hospital clothing was turned in to the ward office. At 8 : 30 A.M. patients discharged were taken to the receiving office by the wardmaster or his assistant and checked out by the receiving office.

When the Camp Hospital was closed upon receipt of an order from the Division Surgeon, all patients were transferred to the Base Hospital, all serviceable property was turned in to the store room, checked, and invoiced to the Medical Supply Dept. Unserviceable property was inspected and condemned.

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CHAPTER VII

SANITARY SQUADS AND COMMITTEES

Paragraphs 774–777 M.M.D. indicate in general terms the duties of sanitary squads in the U. S. Army. In the British and Canadian services similar units designated "sanitary sections" are more highly organized. The heads of the sections are special sanitary officers whose duties, as circumstances indicate, are comparable to those of the sanitary officers of maneuver camps (*q.v.*) or those charged with civil sanitary functions (*q.v.*) or both. These sections are assigned to designated districts either at the base, on the line of communications or with troops in the field. A part (usually 8 men) of the personnel on duty with each regiment, constitute in effect additional sanitary sections whose essential duties are concerned with the water supply of the unit, but the term "Sanitary Section" is commonly applied to quite other detachments consisting of one officer, two noncommissioned officers and twenty-three privates. In the British service many of the men in these squads have been in civil life sanitary engineers, plumbers, chemists, etc. Two soldiers of the Army Service Corps, mechanical transportation, are attached. This personnel consists as far as possible of men who have been specially trained as sanitary inspectors, disinfectors, clerks, laboratory assistants, etc. In the field they are assigned in the proportion of one sanitary section to a division. To this nucleus are added, as required, sanitary squads, each consisting of one noncommissioned officer and five privates, and as many laborers as circumstances prove necessary. They are equipped according to their duties. Each unit with a division has one 3000-lb. motor truck for equipment, tools, etc., and one disinfecting truck.

These sections are charged especially with inspecting the districts to which they are assigned, and indicating both what defects require correction, and how this may best be done. They supplement the efforts of the troops and civilians themselves, but do not take over their duties in this matter. The service necessitates tact, good judgment, and ability to estimate accurately both available resources and the requirements of the question presented. This duty is not merely critical, it is coöperative, and must manifest a spirit of helpfulness.

The general plan of conservancy and of sanitary measures to be employed is published in orders.

Official routine and interior economy of a section are reduced to a minimum.

One man is detailed as office assistant, one as orderly, two as cooks.

The area for which each section is responsible is designated on the map.

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The chief of the section similarly maps the area assigned to each n.c.o. Places where grave sanitary defects are found are marked by flags. If verbal reports of subordinates to the commanding officer of the troops interested fail to produce results, a written report is sent to the medical officer therewith, and if this fail, the matter is reported to the senior surgeon of the district. These subjects are taken up promptly. If a command leaves an insanitary camp site the fact is reported at once.

When a division is more or less stationary, two or three men of the sanitary section attached are assigned to each of the three brigades of which the division is composed for sanitation of the brigade area, and to division headquarters. From four to eight men are assigned to the divisional laundry and baths to supervise the disinfection and washing of clothes. Two men are assigned to each of the bath houses and trench foot wash houses in the divisional area.

Their essential duties at the front are supervision of sanitation generally, promotion of bathing and laundry facilities, and disinfection of huts, buildings, tents and clothing. The laundry work says Goodwin is very extensive and important, and requires skilled supervision. "Each man in the division should have a complete set of washed and disinfected clothing at least once a month." The section also provides hot shower baths for from 1000 to 2000 men daily. At these baths and laundries convalescent patients perform light duties.

When a division moves forward a detachment of two men, with a water-examining cabinet moves forward immediately behind the foremost fighting troops and placards as dangerous all water in the area traversed. It then examines this water for metallic poisons, gross pollution and for chlorine content. The wells are then appropriately labeled and doubtful specimens sent to the mobile field laboratory. It notes the exact map location of each water supply, its character (spring or well) and in the case of the latter, the depth and special suggestions concerning it, *e.g.*, erection of a coping, provision of a windlass, etc.

The section then obtains fatigue parties to bury animal carcasses, destroy refuse, etc. The burial of the dead is effected by parties organized by the Adjutant General.

The equipment of a sanitary section in the British service consists of one ton-and-a-half truck, a disinfecting Foden truck, with a double Thresh installation on it by means of which clothing, blankets, etc., are disinfected, materials for establishing baths, miscellaneous tools, etc.

On the line of communication and at other points not occupied by troops the sanitary sections give especial attention to detection and location of cases of infectious disease, and coöperate with the civil authorities.

The noncommissioned officers assign designated duties to their men and keep records of the reports these render. Lelean suggests that such records be kept in a diary, in which entries are made daily under the following headings: "current number, date, defect noted, action taken, result of action, further remarks." The senior noncommissioned officer is responsible that

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the day's notes are entered each night and that the sites of serious defects are marked by flags.

Mechanics, carpenters, builders, metal workers, etc., instruct troops regarding construction, correction of defects, etc., and under certain conditions are employed to effect these themselves.

The chief of the section should himself inspect daily, certain of the areas assigned to noncommissioned officers and privates, as a check against omissions.

Recommendation has been made that the Field Service Regulations of the British Army provide for a sanitary committee consisting of a line officer to be president, a medical and an engineer officer. They would receive their orders from the commander-in-chief and report to him, inspect stations occupied by troops and seek to correct defects. They would also coördinate the sanitary work of the several military branches, and the work of these collectively, with that of the civil sanitary organizations. They would form a board to which certain sanitary problems might be referred and which would initiate important general schemes of sanitation. Their sphere of action would be limited, as a rule, to the line of communication.

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CHAPTER VIII

THE DIVISION SURGEON

The duties of the division surgeon are indicated in general terms in the Manual for the Medical Department. Some apposite information concerning details of administration can be found in this book in the chapters on "The Department Surgeon" and "Camps of Maneuver and Instruction."

The most urgent duties of the division surgeon are to prevent sickness, evacuate the disabled, provide for the care of those yet with the command and instruct subordinates in their duties. A very important duty is the correction of reports, returns and requisitions passing through his office.

The amount of paper work and of administrative work which his office performs is as a rule limited, and papers are cared for in the manner indicated in the chapter on the "Post Surgeon and Maneuver Camps." In the Punitive Expedition the correspondence book was used, and files of orders, circulars, etc., were attached to boards of convenient size, which facilitated access to them. They may be filed in loose-leaf ledgers.

In order to prevent sickness both line and staff must be educated in the necessity for sanitary measures and informed how these may be applied, simply but effectively. Senior officers are usually practical sanitarians and realize the necessity for orders formulated to promote health. Junior officers and those lacking in experience or in zeal too often regard such regulations with impatience and are lax in their enforcement.

Apposite information may be disseminated by memoranda formulated and submitted to the C.O. with this end in view. Similarly, orders such as those given in the chapter on "Camps of Maneuver and Instruction," but modified according to circumstances, may be formulated and submitted to the commanding officer for publication. Subordinate medical officers, especially the sanitary inspectors and regimental surgeons should be directed to explain to line officers with whom they serve, the necessity for the measures ordered, and to explain in detail how they may be carried out most easily yet effectively. Initial Orders should be adapted to G.O. 45, W.D., 1916 (given below at the end of this chapter), in brevity, thoroughness and clearness.

In the Punitive Expedition the Division Surgeon, Colonel James D. Glennan, held a conference each morning with the surgeons on duty at Dublan, and discussed with them any subject of current interest pertaining to medical department service. At the end of the conference, having acquainted all medical officers with the situation, he directed what action should be taken. These conferences considered in great detail questions of sanitation, equipment, instruction, etc., and were highly educative. When

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the command is widely scattered, a course of instruction such as that directed in the chapter on the "Department Surgeon" should be ordered.

At these conferences in the Punitive Expedition there were passed from hand to hand, charts, kept up daily, which showed the prevalence of the several infectious diseases which existed in the division. Separate charts were kept for bronchitis and infectious diseases generally, *e.g.*, pneumonia, dysentery, measles, tonsillitis, infectious conjunctivitis, gonorrhea, syphilis, chancroids, and for venereal diseases collectively. To exemplify:

Three charts for pneumonia were kept up. The first showed the name, official designation, date of admission, morning and evening temperature of each pneumonia patient, in successive columns, from left to right of the page. Chart 2 for pneumonia showed a list of the organizations to which patients belonged and to the right of these, showed columns for dates. Each of the latter were subdivided into three subcolumns as indicated, for admissions, discharges and remaining.

January	1			2			3		
	A	D	R	A	D	R	A	D	R
Sig. corps.....									
24th inf.....									
Etc.....									

Chart 3 for pneumonia showed names in the sequence in which they appeared on the report of S. & W., official designations, date of admission and such notes as bacteriological findings, "from bronchitis list," etc. Paratyphoid and dysentery cases were recorded on similar charts. Also a list of new cases of each of these classes of patients was made out daily and a note bearing on probable source of infection entered opposite each name.

For other non-venereal infections only chart 2, as given above was made out.

For venereal cases the following charts were kept:

1. A slip showing names and official designations of new cases, number returned to duty of each kind of venereal disease, number remaining, and totals of new cases of each type of venereal disease separately and collectively.

2. Similar to chart 2 above. One chart for each disease and one for all venereal diseases consolidated.

3. A chart of each organization (regiment, camp, etc.) showing: (1) names of new cases of venereal diseases whether contracted in Dublan or elsewhere; (2) when contracted; and (3) disposition.

Graphic charts showing the daily percentage morbidity of each company, regiment and camp, were also kept up.

The Sanitary Inspector of the El Paso District kept up separate charts showing the percentage morbidity from pneumonia and other infections. He

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also kept up a map which showed the location of the several camps of the district. Each case of infectious disease was marked by a pin with a colored glass head—one color for each variety of disease. In order to permit facility of reference to a card index file that was kept up for all infectious cases, each pin transfixed a very small slip bearing the name of the patient and the card index number.

Provision for the care of the sick is effected through the regimental surgeons, camp and field hospitals, ambulance companies and rest stations whose functions the chief surgeon must coördinate. In order to effect this he should have a thorough knowledge of the characteristics of his personnel, so that he may assign each to the best advantage.

Civilians working in the camps of the Punitive Expedition were registered and required to submit to vaccination, typhoid and paratyphoid prophylaxis, and semi-monthly examination of their clothing for lice. If they refused they were expelled from camp. Names of all civilians, including those of Chinese venders established on the outskirts of camp were recorded in a book kept for that purpose, with dates of prophylactic treatment and physical examinations. Because of the modesty of the Mexicans as a people they were not required to expose their persons, but their undershirts were drawn up, inside out, over their heads, and the seams and the hair on the head and in the axillæ examined. If infested they and their clothes were treated with gasoline. Each civilian had a card, on which was noted his name and the date of his last examination, duly authenticated by the signature of the camp surgeon. The camp guards were instructed to inspect these cards frequently and to deport from the camp any whose cards had not been authenticated within sixteen days.

The following are some of the more important memoranda, circulars and orders issued by Colonel A. N. Stark, or at his instance, when chief surgeon of the El Paso District. They cover some of the more important points which arose and illustrate to a limited degree the scope of a division surgeon's activities.

1. The army surgeons stationed in this district are unanimous in their reported conclusion that the marked increase in diseases of the air passages, particularly pneumonia, and of communicable diseases, is due to the congested congregation of the men in enclosed spaces, where the close proximity of an infected person makes certain the transmission of his disease to others.

2. The month of March, with its notoriously unsettled weather, is productive of more cases of pneumonia than any other month. Advice and appeals through the press having failed, the only resource is to prevent men from coming into contact with one another in close atmospheres; and to this end, following the urgent recommendation of the surgeons, the district commander is constrained to adopt heroic measures for the brief period of two weeks beginning March 1, in order to reduce the incidence of the very fatal type of pneumonia prevalent in this vicinity.

3. The district commander directs that for the period of fourteen (14)

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days, beginning March 1, soldiers be denied the privilege of visiting town, except in the course of government business, and then only until 6:30 P.M. Also, that all gatherings in enclosed buildings in camps and visiting from one tent to another be prohibited during this period.

4. Regimental and separate organization commanders will do everything in their power, during this period of restriction, to interest the men through open-air entertainments and other diversions.

5. It is earnestly hoped that at the end of this period, the results of these restrictions will be so favorable that the usual privileges of leaving camp will be fully resumed.

6. This memorandum will be read to the command at the two successive roll calls following its receipt.

1. Upon the appearance of a case of glanders the following will be observed:

(*a*) All articles that have been used on the infected animals will be placed in the metal watering troughs and boiled, thoroughly submerged, for one hour.

(*b*) Rope picket lines will be boiled. Wire picket lines will be thoroughly washed in cresol solution.

(*c*) Nose bags will be boiled and then stored.

(*d*) Application will be made to the district quartermaster for the necessary number of metal feed boxes.

1. Attention of all medical officers is called to the provisions of the M.M.D. in regard to the preparation of requisitions for medical property. The following points are so frequently neglected that special attention is invited to them.

(*a*) Requisitions should be made in quintuplicate, one copy being retained, and four forwarded direct to this office. They should be prepared on the proper Medical Department blank forms, No. 35 if it is available. If blanks are not available, use plain paper.

(*b*) The headings at the top of the form should all be properly and completely filled in. The "station" should include not only the town or camp, but also the name of the hospital or infirmary; as, for instance, "Regimental Infirmary, 7th Illinois Infantry, Camp Wilson, Texas," or "Indiana Field Hospital No. 2, Laredo, Texas." In case of a regimental infirmary, "command" means the entire regimental strength. "Annual," "quarterly," "emergency," "post," "field" or "dental" should be stricken as directed in note.

(*c*) The requisition should be signed by the senior surgeon of a regiment or the commanding officer of a field hospital or ambulance company, and his rank should be placed below the signature. Approval of medical requisitions by the regimental commander is not necessary. The date space should be filled in and the requisition briefed.

(*d*) The surgeon of an organization is responsible for providing medical supplies *on his own initiative*. He should, therefore, frequently check over his property and make timely requisitions before medicines, dressings, etc.,

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are approaching exhaustion. As far as possible, a reserve should be kept on hand to draw from for daily use, so that chests and cases may be kept intact and ready for emergency use in the field. Ordinarily, requisitions should cover anticipated needs for one month.

(*e*) Organizations under canvas will hereafter be furnished field supplies only, except at isolated stations where no hospital facilities are available. This step is taken in order that officers and men may become familiar with the character of supplies which would have to be depended on in actual field service. The medicines, dressings, etc., available are shown in Pars. 864, 865, 866, 869, 871, 872, 874, 879, 907, 913, 923, 932, 933, 940, 941, 947, 948, 953, 954, 955, 956, 958, Manual for the Medical Department, 1916. Only those field supplies pertaining to a camp infirmary should be asked for by the surgeon of a regiment. Articles shown on post supply table, Pars. 843, 844, and 845, Manual for the Medical Department, 1916, will be approved only for the isolated stations referred to above and the reason for asking for them must be shown in the "*Remarks Column*" in each instance.

(*f*) In the first column of the requisition blank form, there should be entered the official names of the articles desired, written just as they appear in the supply table. Two or more lines may be taken for each entry if necessary. In the first column, after the name of the article should be entered the appropriate "unit of issue;" viz., number, bottle, tin, roll, pound, ounce, dozen, gross, quart, etc. The unit entered on the requisition should conform to that shown in the supply table.

(*g*) The "expended," "on hand," and "wanted" column should contain numbers only. Not infrequently requisitions are submitted with units, such as "pills," "bottles," "rolls," "dozen," etc., entered in these columns. If none of the articles in question are on hand, a 0 should be placed in the proper location in the "on hand" column.

The following suggestions were offered to assist Medical Officers of the National Guard in preparing the Sick and Wounded Reports:

(*a*) Read and study carefully Pars. 427 to 462, M.M.D., 1916.

(*b*) In order that a correct register number may be kept it is suggested that you begin immediately an office register book ruled to show in separate columns each entry required on the S. & W. cards and prepare the S. & W. cards from this book. This will obliterate many of the errors now experienced in the loss of numbers. A brief of the diagnosis should be kept in a ruled column in office record book most especially in field service as cards are apt to be blown away or misplaced. By using this method and recording cases in book as they are taken up, and posting book from day to day the S. & W. Report can be made up at the end of the month if circumstances prevent its being made up from day to day as required by Par. 432, M.M.D., 1916, as all data required would be at hand. *Report cards should be completed from day to day as far as practicable.*

(*c*) Adhere strictly to the nomenclature of diseases (Par. 455, M.M.D.,

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1916). Observe carefully Par. 456, especially sections (*c*), (*d*), (*h*), (*j*) and (*o*).

(*d*) Space 8, "Nativity," state or country should be given; example: Ohio, England; space 9, "Service," only federal service considered; space 10, register numbers must be kept in proper sequence as to date of admission of cases.

The number of last previous admission, if case has previously been on sick report, will be recorded followed by the present number; example: 23–40.

Disease or injury having existed prior to muster into Federal service the diagnosis (space 13) should be followed with statement "existed prior to muster into Federal service."

When "Undetermined" is used in case of injury some form as follows should be used: "Injury of abdominal organs (state degree as mild, moderate, or severe); exact nature undetermined, time of observation too limited; accidentally received from fall from horse while at drill at Camp Cotton, El Paso, Texas, July 10, 1916." Also see Par. 456, section (*h*), M.M.D., 1916.

In case of old injury the condition on admission should be stated. See Par. 456, section (*o*), M.M.D., 1916.

(*e*) Under "Disposition" cases transferred should state authority; example: "Transferred to Base Hospital, Ft. Bliss, Texas, VO. CO., El Paso District."

(*f*) In transferring cases to base or other hospitals if in doubt as to diagnosis state "Undetermined" followed with such remarks as "time of observation too limited" as required by section (*r*), Par. 456, M.M.D., 1916.

(*g*) All spaces on cards must be neatly and carefully filled in and erasures initialed by the medical officer signing or initialing the cards. The medical officer signing or initialing the cards (space 21) will have his exact rank recorded; example: Major, M. C. Mass. N. G.

(*h*) Space 26, "days lost," should be accurately recorded. In case no days are lost a dash should be made opposite the proper month under "quarters" and "hospital" also under "total."

(*i*) The "Transfer Card" must be signed in full by the medical officer. See Par. 215, M.M.D., 1916. All other cards except "Supplemental" or "Correction" cards may be initialed only.

(*k*) Record to be kept only of cases excused from duty, and marked "qrs" or sent to hospitals, or record cases. See Par. 428, sections (*a*) to (*h*), M.M.D., 1916.

(*l*) Patients marked "quarters" are under your jurisdiction and will only be allowed to leave camp or perform labor upon recommendation of the medical officer. They should remain in their company during such time. Surgeons should ascertain from time to time during the twenty-four hours whether or not their patients are observing these rules.

(*m*) When "Transfer Cards" are made out, a second copy should be made before "Transfer Card" is forwarded, omitting words "Transfer

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Card," from which "Report Card" can be made later. This card can be used for the retained records.

(*n*) As the Sick and Wounded Report is a true record of all cases of sickness every effort should be made to make this a correct report.

(*o*) If in doubt on any point concerning Sick and Wounded Reports seek advice from the division surgeon.

(*p*) All Sick and Wounded Reports will be forwarded to the division surgeon's office.

The following form was used to secure correction of errors in reports of sick and wounded in the El Paso District. Items were appropriately checked, and cards to be corrected enumerated under each such item.

SICK AND WOUNDED REPORT MONTH OF ——

ORGANIZATION: ——————————————————

NOMINAL CHECK LIST: ——————————————————

"Month completed" should not be filled in.

Last three lines should not be used on page as it interferes with binding.

Names, register numbers, rank or organization do not correspond with cards.

Report Cards:

Item 2: Christian name to be written in full on cards (Par. 437, M.M.D., 1916).

Item 6: Age at nearest birthday—no fractions (Par. 439, M.M.D., 1916).

Item 7: Use proper abbreviations on cards (Par. 440, M.M.D., 1916).

Item 8: American or U. S. will not be accepted (give State, Par. 441, M.M.D., 1916).

Item 9: U. S. service only to be stated on cards.

Item 10: Not in consecutive order, compare with dates (Par. 443, M.M.D., 1916).

Item 11: Do not use figures for months on cards (Par. 444, M.M.D., 1916).

Item 12: Does not comply with wording as required by (Par. 445, M.M.D., 1916).

Item 13: (*a*) Diagnosis does not correspond with diagnosis on Transfer Card. Add: "Diagnosis on Transfer Card not concurred in" on cards (Par. 446, M.M.D., 1916).

(*b*) Degree of severity on cards (Par. 446, M.M.D., 1916).

(*c*) Where and when (Par. 456, M.M.D., 1916).

(*d*) Producing agent, cards (Par. 456, M.M.D., 1916).

(*e*) Accidental, intentional, self-inflicted, cards (Par. 456, M.M.D., 1916).

(*f*) Location not definitely stated on cards (Par. 446, M.M.D., 1916).

(*g*) Cause to be stated on cards (Par. 446, M.M.D., 1916).

(*h*) Which side on cards (Par. 455, M.M.D., 1916).

(*i*) Nomenclature not complied with on cards (Par. 455, M.M.D., 1916).

(*j*) Acute or chronic (Par. 456*d*, M.M.D., 1916).

(*k*) Location, variety and cause (Par. 456*j*, M.M.D., 1916).

(*l*) Venereal or non-venereal (Par. 456*j*, M.M.D., 1916).

(*m*) Old injuries, condition on admission, etc. (Par. 456*o*, M.M.D., 1916).

(*n*) Means employed for detection (Par. 456*g*, M.M.D., 1916).

(*o*) Treated in "quarters" or "hospital" cards (Par. 447, M.M.D., 1916).

Item 14: Remark "Existed prior to enlistment" or "Existed prior to muster in" should appear under 13; if not, why not in the line of duty (Par. 446, M.M.D., 1916).

Item 15: (*a*) Change of diagnosis should show: Date new diagnosis should show: In the line of duty (Par. 449, M.M.D., 1916).

(*b*) Operation should show: Date, operation: Anesthetic used should show on cards (Par. 449, M.M.D., 1916).

Item 16: "Quarters will not be accepted: must be "duty," "remaining," "transferred," etc. (Par. 450, M.M.D., 1916).

Should read "Doing full duty" (Par. 450*b*, M.M.D., 1916).

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State cause of death; result of autopsy; origination (not) in the service and (not) in the line of duty (Par. 450*d*, M.M.D., 1916).
Cause and degree of disability (Par. 450*e*, M.M.D., 1916).
Specific destination (Par. 450*j*, M.M.D., 1916).

Item 18: Must be filled in on all cards (Par. 452, M.M.D., 1916).

Item 21: Not signed or initialed. Rank must be stated (example: Maj. M. C. Ohio N.G.) (Par. 435, M.M.D., 1916).

Item 26: Day of "Return to duty" is not counted. On all other cases last day is counted. Number of days should be indicated as on back of card. Year must be filled in. This item should not be crowded but continued on back of card under (*a*), (*b*), (*c*), (*d*), etc. Black ink or ribbon must be used (Par. 434, M.M.D., 1916).

Form 51: "Command" should state:
Mean strength of command.
Numerical should be corrected.
Number of days does not correspond with total number of days on back of cards.
Signature missing.
Organization on all cards and Nominal Check List must be clearly stated: "M.D., O.N.G.," "1st Mass. F.A.," "16th Mass. Inf.," 4th Ohio Cav.," "Mass. S.C.," "Ohio Engrs.," etc.

Report to be corrected as indicated hereon and returned to this office with this paper, at the earliest practicable date.

The following instructions regarding the discharge of enlisted men on account of disability are brought to the attention of all surgeons:

1. If after repeated examinations and sufficient observation the soldier is found to be permanently unfit for service, you will report the fact by letter to the commanding officer. This letter will state the cause of the disability and whether it is or is not in line of duty. The commanding officer will direct the soldier's company commander to prepare Form 17, A.G.O., and return to the surgeon through his office. Upon receipt of the form the surgeon will complete the certificate. Attention is invited to the fact that while the diagnosis is given, the surgeon frequently neglects to state how it disables. If surgical treatment is recommended to remove the disability but declined by the soldier the fact will be stated. The surgeon will also be sure to state that the disability is or is not in line of duty. The extent to which he is disabled from earning subsistence is expressed by a simple fraction, as 1/3 or 1/4 or $\frac{1}{20}$ etc., in words and figures.

2. The surgeon will prepare a medical history of the case which should set forth the symptoms, duration, complications, treatment and such other pertinent facts as he may be able to ascertain by inquiry without undue delay.

3. The letter, certificate of disability (one copy) and medical history are referred to a board of at least two medical officers, convened by the camp commander.

4. This board will carefully examine the soldier and all papers referred to it. Differences of opinion of the company commander, the surgeon and the board will be reconciled if possible. Otherwise the board will proceed as outlined in Par. 9, G.O. 174, 1909, W.D. The proceedings of the board will be recorded on Form 484, A.G.O.

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5. All papers referred to the board together with duplicate copies of its proceedings in each case will be forwarded by the president to the commanding officer, who forwards them to the department commander, through military channels.

Each separate organization drawing fresh beef from the depot quartermaster, or from packing-houses through the depot quartermaster, will purchase a clean tarpaulin or canvas for the purpose of keeping the beef in a sanitary condition. The officer or noncommissioned officer in charge of drawing fresh beef will be held responsible for keeping the tarpaulins or canvas clean and in sanitary condition and also that all wagons or trucks are cleaned before being used for transporting fresh beef.

1. All organizations of this command are forbidden to purchase meat and meat products from any firm except the following which are subject to government inspection and comply with sanitary standards:

Here follow names of firms.

2. When other firms comply with the standard insisted upon by the Bureau of Animal Industry, the above list will be extended.

TO ALL SURGEONS AND COMMANDING OFFICERS OF SANITARY UNITS

Patients transferred to hospital will not be noted on Form 83, M.D., as the transfer card closes the transferring officer's record.

On each month's report of sick and wounded these cases are to be noted as transferred on a certain date.

When camp hospitals are in operation, cases will be transferred to these establishments and the transferring officer's record closed.

When a camp hospital is opened all camp infirmaries will be closed except one for each brigade.

Separate detachments, as truck companies, etc., will maintain their camp infirmaries.

Camp hospitals will keep a complete set of records as other medical establishments and if a case is transferred to base hospital the record is completed as if from a regiment.

Except as directed send all reports to the division surgeon direct. A copy of the change of status Medical Department and personal reports, officers, is also desired at this office.

As all must make out the statistical report called for by current orders, surgeons are requested to take more pains with the preparation of data required daily both from adjutants and themselves.

The number of old cases calls for all under treatment including those absent which manifestly includes those in hospitals, on sick leave, etc.

The rate per 1000 of both old and new cases are quickly and easily calculated by multiplying the number of each by 1000 and dividing by the total strength of the organization, being careful in the position of the decimal point.

The infectious cases, including venereal, should be stated as number and kind per company.

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A perusal of the daily form sheet should clear up any difficulties.

The correction of errors in calculation made by surgeons involves a great deal of unnecessary work on the part of this office, for in this office the data obtained from surgeons is applied to the regimental charts drawn to scale.

SCHEDULE OF FIELD INSTRUCTIONS FOR MEDICAL DEPARTMENT FROM APRIL 1 TO NOVEMBER 1, 1916

I. Instruction Medical Department detachments on duty with Engineers, Cavalry, Field Artillery and Infantry organizations:

1. Schedule for Monday, Tuesday, Wednesday and Thursday:

Equitation and care of animals: 7:30 to 9:00 A.M.

Stables: 9:00 to 10:15 A.M.

Progressive instruction: 10:15 to 11:45 A.M.

Progressive instruction: 1:00 to 3:00 P.M.

(*a*) Morning period of progressive instruction: 10:15 to 11:45 A.M.

All men will be instructed in nomenclature and use of parts of packsaddle; mule will be loaded each day.

Detachment will be taught how to orient map by compass, by watch, and by location of prominent points, and how to measure ground distances on map. Each soldier will in turn be required to conduct the detachment to a point marked on the map.

Detachment will be taken into foothills and taught meaning of contours and shown how practicability of slopes for vehicles can be determined from the map; protection from fire, both direct and indirect; the establishing of first-aid stations and conduct of same.

Detachment will be carefully instructed in methods of spraying latrines with lampblack and crude oil; in fly-proofing Havard boxes; the construction and care of open shallow trenches for short camps; sanitary survey of environment including detection of fly and mosquito breeding places and their abolition, disinfection of water, and personal hygiene in the field.

(*b*) Afternoon period of progressive instruction, 1:00 to 3:00 P.M.

Three courses of instruction in Medical Department Drill Regulations, to be carried on simultaneously.

Instruction will be given in trench warfare, the wounds caused by grenades, trench bombs, and cutting weapons, with the infections to be expected from the same and the means adopted for prevention, the effects of irritant gases and the approved means of protection against them.

Each regimental surgeon will prescribe the portion of the two hours to be devoted each day to the respective courses, in accordance with the needs of his own detachment, but none of the drill prescribed will be omitted.

2. Friday: The entire day: A medico-military problem.

3. Saturday: 9:00 A.M. Inspection.

II. The following schedule will govern the training of Field Hospital Companies:

Monday and Wednesday, 7:00 to 11:45 A.M.

All hospital property to be left in camp and proceed with company

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transportation to a suitable location where the following exercises will occur:

One hour's company and litter drill; the protection from fire from enemy in assumed positions; field problems in orientation map reading; visibility; improvisation of orders, both verbal and written; observation of a terrain for a stated time with a report of the objects seen; improvisation of wagons or trucks into ambulances; relay report-carrying competitions; individual tent pin driving contest; improvisation of cooking utensils; wagon or truck drill; uses of contents of medical and surgical chest; the medical and surgical chest supplementary, and the sterilizer chest. Some of these exercises will occur each day with a view of obtaining training in them all during the period. Quizzes of noncommissioned officers by officers; quizzes of men by noncommissioned officers.

Tuesday and Thursday, 7:00 to 11:45 A.M.

March to a designated place in full field equipment; pitch the field hospital; admit and discharge six patients; pitch a shelter tent camp for hospital personnel; make a careful inspection with everyone accompanying the inspector. Errors to be pointed out in detail. While the hospital is being erected the wagons or trucks to drill. Every officer and noncommissioned officer to be instructed in laying out the field hospital. Also pitching tentage.

Monday, Tuesday, Wednesday and Thursday, 1:00 to 3:00 P.M.

Exercises in the following:

Preparation of the soldier's pack; demonstration of various types of incinerators; disinfection of water; kinds of latrines in camp and on march and their care; first aid and bandaging; resuscitation; instruction in the use of the clinical thermometer; also in taking the pulse and respiration; a talk on flies and mosquitoes with demonstration of breeding, traps, bait and means of prevention; demonstration of uses of personal equipment (each man to know the contents and uses of his belt and pouch); location of principal arteries.

Instruction will be given in trench warfare, the wounds caused by grenades, trench bombs, and cutting weapons, with the infections to be expected from the same and the means adopted for the prevention, the effects of irritant gases and the approved means of protection against them.

Friday: The entire day: A medico-military problem.

Saturday: 10:00 A.M.: An inspection and checking of all equipment for which each soldier is responsible. Once during the month the entire field hospital equipment will be checked. A list of shortages will be submitted to the Director of Field Hospitals with a statement of the action taken.

III. The following schedule will govern the training of ambulance companies: Seven hours will be devoted to instruction as outlined below on Monday, Tuesday, Wednesday and Thursday except as noted:

(*a*) Camp sanitation one and one-half hours on all days. Routine camp police will be arranged and supervised in such a manner that it will be instructive for the entire company.

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(*b*) Care of animals and transportation (mule and motor) one and one-half hours on all days, may be divided between morning and afternoon and will cover duties at stables and routine care of transportation.

(*c*) The following field instruction will be covered each week on days noted above; morning three hours, afternoon two hours:

Establishing and operation of dressing station for combat, with routes to dressing station outlined by guidons.

Marches with full equipment, establishing shelter tent camp and cook one meal (individual or company cooking) one day per week; disinfection of water; kinds of latrines in camp and on march and their care; incinerators and their care.

Driving ambulances over difficult terrain.

Application of first aid in the field.

Loading and transporting patients by ambulances.

Preparation of wagons and trucks for patients and loading same.

Sufficient drill in schools of detachments and company to prevent deterioration, not to exceed two hours per week.

Lecture with illustration of field duties.

Instruction will be given in trench warfare, the wounds caused by grenades, trench bombs, and cutting weapons, with the infections to be expected from the same and the means adopted for prevention, the effect of irritant gases and the approved means of protection against them.

Friday: The entire day: A medico-military problem.

Saturday: Forenoon will be devoted to thorough cleaning of camps and equipment and inspection in full field equipment, mounted or dismounted.

IV. Beginning Friday, and continuing on each succeeding Friday, a medico-military problem applied to a mixed brigade and to a division will be solved on the field. When efficiency is attained night exercises will be held.

The exercises will be held under the direction of the division surgeon, the problems with maps being given out at the time of assembly at point to be designated.

The sanitary detachments of regiments and smaller organizations, and ambulance companies and field hospitals with equipment will attend; only sufficient personnel for service with organization to which attached remaining in camp.

Lunches will be taken.

The division surgeon makes recommendations as occasion arises covering the measures indicated to promote the healthfulness of the command. Sometimes they are made verbally, oftener in the form of a letter so that no misunderstanding occurs. When it is desired that the measures recommended continue in force as routine practices, the letter is accompanied by appropriate memoranda in order.

Some such memoranda and orders are found in the chapter on the Sanitary Service of Maneuver Camps. Another from Army Headquarters is quoted below. The points which such orders should consider when pub-

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lished for the guidance of newly raised troops are discussed by Colonel Munson as follows:

"The sanitary order issued should be so complete as to need little amendment or addition and be thoroughly adapted to local needs and conditions, since it serves as a Sanitary Code for the military community. It should deal with general and salient facts only, excluding details which becloud main issues. It should be specific in statement, laconic in phraseology, simple in language. Its scope and requirements vary with circumstances, depending upon place, climate, season and other factors, for the distribution and prevalence of disease is confined within more or less restricted geographical lines and is largely dependent upon temperature and rainfall. The physical equation of the soldier remains about the same, but the environment may greatly change; and the latter is most important in relation to disease. Sanitary, like tactical situations, cannot be met in advance by the application of fixed rules, and methods of meeting situations must vary with circumstances. But in warring against disease, as against human foe, there are basic facts and principles relating to offense and defense which control the sanitary action necessary in camp life generally. To these are added such special instructions and information as the particular environment renders important."

Infectious Diseases.—The entire question of infectious diseases is fully discussed in paragraphs 183–200 of the manual for the Medical Department. Attention is especially called to the Malarial and Syphilitic registers (Forms 56 and 57 M.D. respectively) required to be kept of cases suffering from these diseases. Pars. 183-200 M.M.D.

Reports of Epidemic Diseases.—On the appearance of the first recognized case of typhoid fever, paratyphoid fever, measles, diphtheria, cerebrospinal meningitis, or other epidemic disease with a command, the Surgeon will at once report the same, and the nature and extent of the epidemic, to the regimental commander, sending at the same time a duplicate report direct to the Department Surgeon and a triplicate report direct to the Surgeon General. In the event that the regiment forms part of a division, the duplicate report is sent to the Division Surgeon instead of to the Department Surgeon. Pars. 201–203 M.M.D.

The continuance of the epidemic, its progress and decline, its origin or importation, the measures taken for its suppression, and such other information in relation thereto as may be important or interesting will be noted from month to month in the sanitary reports.

Illustrative orders affecting sanitation are found elsewhere in this book. The following points to be considered in the formation of such an order have been emphasized by Munson.

1. Caption of Order.

II. General Preliminary Consideration, including statements: showing that epidemics of disease not only cause suffering but may utterly destroy the troop's efficiency and defeat the purpose for which they have been organized.

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Prevention of disease in this camp is not only a matter of self interest to individuals but a patriotic duty of all concerned.

Epidemics of disease in this camp are not only a matter of self interest to the individual but a patriotic duty of all concerned.

Epidemics of disease are unnecessary, and usually are preventable under conditions readily attained.

Requisite preventive measures are not speculative but based on facts in the life history of the disease organisms concerned, and have their efficiency conclusively demonstrated.

The success of these measures depends on their scrupulous observance by all, since carelessness by a few may neutralize the efforts of the many to prevent sickness in themselves and others.

Earnest coöperation by all is enjoined. These orders will be strictly enforced, but compliance based on an intelligent appreciation of their beneficial purposes to all should render disciplinary measures almost unnecessary.

Since sound health is a prerequisite for military training and service, conformance to right modes of life, as prescribed in these orders, will be regarded as taking precedence over other considerations.

III. Drills and Exercises, including:

1. Prohibition of any military formation except setting up exercises before breakfast.

2. Statement of inability of troops to stand severe exercise until gradually accustomed to it by progressive training.

3. Prohibition of drills, other than marching, for more than four hours daily. Prohibition of any military formation for periods exceeding six hours daily.

4. Designation of Sunday as a day of rest except for performance of absolutely necessary duties.

5. Caution as to dangers of over-fatigue, exposure to sun, or wetting or chilling.

IV. Personal Inspections, including the following requirements:

1. The men of each organization shall be carefully inspected within a fixed maximum period after arrival in camp by the sanitary inspector or duly detailed medical officers, for the detection of transmissible diseases.

2. Organization commanders cause their surgeons and subordinate commanders to make together weekly inspections of the persons of the men, on a designated day and hour, to determine the freedom of the men from communicable disease and the condition in regard to cleanliness of the body and clothing.

V. Personal Cleanliness, including:

1. Specification of the minimum number of times each soldier shall bathe weekly.

2. Statement that bath water frequently contains the germs of disease, and specifying the methods for its disposal.

3. General requirements for suitable draining and cleanliness of bathing places.

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4. The calling of attention to the provision of Army Orders which requires the washing of hands after visiting latrines and before each meal.

5. Requirement for the daily washing of the feet of each soldier.

6. Admonition as to need for frequent brushing of the teeth by the men.

7. Specification as to the maximum time underclothing may be worn without changing, and warning against accumulation of soiled clothing.

VI. General Police, including:

1. Requirements for maintenance of scrupulous cleanliness, at all times, of camp areas and their surroundings.

2. The responsibility of certain officers for maintaining efficient camp police, together with requirement of their personal inspection of the work at its conclusion.

3. The hours for police and general methods by which organizations shall police their respective areas.

VII. Care of Tents, Sites and Contents, including:

1. Requirement for the cleanliness and order of tent interiors.

2. Prohibition of carrying foodstuffs into tents.

3. Requirement for raising tent walls daily during fair weather.

4. Requirement for sunning of tent areas and their contents by furling or striking tentage and removing contents at frequent periodic intervals during fair weather.

5. Requirement for removal from tents of clothing, blankets, and bedding and their thorough exposure to sun and wind daily during stormy weather.

6. Requirement for adequate ventilation of tents at night and during stormy weather.

7. Requirement that, where practicable, bedding shall be raised above the ground by camp cots or improvised arrangements.

VIII. Water, including:

1. Statement of the general quality of drinking water available on the camp ground and its vicinity.

2. Prohibition of the use of water by the command from any but authorized sources.

3. Designation of the sources of water authorized for drinking and kitchen use, for animals, for bathing, and for washing clothing.

4. Requirements for water purification, if any, and instructions as to methods by which this is accomplished.

5. Provisions to be made for storage and distribution.

6. Requirement that troops taking the field shall carry filled canteens, with caution against free drinking of water on marches.

7. Canteens should be boiled or scalded each week.

IX. Kitchen and Food Supply, including:

1. Warning to all officers, but especially company commanders, to pay special attention to scrupulous cleanliness of cooks, kitchens and their surroundings, and to the economical, digestible and savory preparation of food therein.

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2. Requirements for protection of food and water from dust, flies and sun.

3. Requirements for establishment of suitable eating places near each company kitchen.

Requirement for provision of adequate facilities for, and the enforcement of, immediate cleanliness and scalding of eating utensils by the men after using.

4. Prohibition of mixing solid and liquid kitchen wastes.

Destruction of kitchen wastes by kitchen fires, with deposit of unavoidable residue in designated containers, or such other method of disposal as may be directed.

General directions for rendering garbage containers inoffensive and unattractive to flies.

5. Prohibition of throwing on ground water from kitchens in which eating utensils have been washed.

Requirements for construction and care of seepage pits or other local disposal of waste.

Caution for economy in use of water in kitchens, consistent with cleanliness.

6. Prohibition of sale of milk, ice cream, soft drinks, fruit or other foodstuffs within camp limits, except by persons, under conditions, and from sources approved in writing by the sanitary inspector.

7. Prohibition of assigning men to kitchen, for light duty, without approval of the surgeon in each case.

X. Disposition of Garbage and Refuse, including:

1. Directions as to the manner in which, and the persons by whom, the work of garbage collection and removal is to be accomplished.

2. Prohibition of turning over garbage and refuse to, or their removal by, unauthorized persons.

3. Designation of the places to which garbage and refuse shall be conveyed for disposal.

4. Directions for the means by which garbage and refuse shall be destroyed or rendered innocuous, together with designation of the officer or department charged with its accomplishment.

XI. Disposition of Excreta, including:

1. Statement that human excreta, under camp conditions, practically always contains the germs of transmissible diseases, and are the greatest danger to the health of the command.

2. Caution as to the great danger to the health of all if discharges from the human body are scattered indiscriminately.

3. Announcement that voiding of urine and feces, except in authorized places, is made a military offense and will be severely punished.

4. Statement of means or apparatus to be employed for reception and disposal of excreta.

Statement as to who will be responsible for their maintenance and care.

Outline of required maintenance and care, including frequency of police

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of the latrine, scrubbing of its seats and use of toilet paper. It includes sufficient directions for the routine sanitary management of the special means or apparatus employed.

5. Statement as to by whom removal or destruction or other treatment of excreta deposited therein shall be accomplished.

Statement as to frequency with which removal or destruction or other treatment shall be completed.

General instructions as to how such work shall be accomplished.

XII. Night Urinals, including:

1. Statement of the great dangers of disease arising from urine voided upon the ground.

2. Requirements for placing suitable receptacles for urine in the company streets at night, the marking of the sites by night and day, and the method and frequency of disinfecting such sites. The care and disposition of receptacles when not in use.

XIII. The Fly Plague.—(If conditions permit propagation of flies, as would probably be the case, the order includes:)

1. Statement of the danger of the fly as a transmitter and harborer of disease germs.

2. Statement as to filthy hatching places and feeding habits of the fly.

3. Statement that flies are practically unnecessary in camps and that their existence in any numbers is a reproach to the cleanliness of organizations and efficiency of commanders. Their presence implies the presence of filth.

4. Outlines of measures required under existing conditions, for destruction of, and protection against the fly in its several stages of development.

XIV. Prevention of Venereal Disease and Alcoholism, including:

1. Statement as to the great prevalence of venereal disease among debased women frequenting the vicinity of military encampments.

2. Warning as to the frequently severe character of venereal disease, and admonition urging sexual continence.

3. Statement as to value of certain precautionary measures in preventing these diseases, and where and how the materials for such precautions may be obtained.

4. Statements of the evils of the use of intoxicants, especially the crude beverages sold in the vicinity of camps.

5. Admonition for abstinence from intoxicating liquors.

6. Prohibition of loitering by immoral persons or vendors of intoxicants or drugs within camp limits, and charging the provost marshal with vigorous enforcement of this order.

XV. Prevention of Certain Special Diseases.—(This section should include such general information and instructions as to cause, means of spread, and means of prevention as may be necessary, regarding such special diseases as conditions of environment require shall be particularly guarded against. This section according to location and circumstances, would undoubtedly include one or more of the following:)

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Typhoid fever, malarial fever, typhus fever, yellow fever, dysentery, diarrhea, bubonic plague, Asiatic cholera, hook-worm disease, cerebro-spinal meningitis, measles, tonsillitis, bronchitis, pneumonia, etc.

XVI. Detection and Investigation of Infectious Diseases, including:

1. Statement that early diagnosis of communicable disease is most effective in preventing its spread.

2. Requirement that organization commanders cause any cases of indisposition to be promptly reported to the surgeon, irrespective of the wishes of the man himself.

3. Requirement that no cases presenting febrile temperatures shall be retained on the regimental area.

4. Prompt removal to a suitable establishment outside the camp area, of any case which a medical officer has reason to regard as suffering from a dangerous communicable disease.

5. Prompt report to the sanitary inspector, in writing, by the medical officer in charge, of any case regarded as suffering from a dangerous communicable disease.

6. Investigation of any case of dangerous communicable disease, under the sanitary inspector, to determine and remove, if possible, the source of infection.

XVII. Sanitary Inspection and Responsibility, including:

1. Charging sanitary inspectors, if designated under the surgeon, with sanitary supervision of portions of the camp allotted them.

2. Requirement that the sanitary inspectors shall make thorough sanitary inspections of the camp areas twice daily.

3. Statement that the above supervision and inspection in nowise relieves organization commanders from responsibility for unsanitary conditions within their jurisdiction.

4. Statement that any special directions which the sanitary inspector may give, in enforcing the general provisions of this order, have the approval of the commander and will be promptly obeyed.

XVIII. Publication of the Order, including:

1. Requirement that a copy of this order shall be posted conspicuously in every company, troop or battery.

2. Requirement that the order shall be read to each organization at retreat for three consecutive days after issue.

3. Requirement that it shall be read and carefully explained within forty-eight hours after arrival, to each recruit joining, subsequent to the general publication.

XIX. Signature and Authentication:

Sanitary discipline.

While sanitary orders outline the procedure to be followed, they are followed voluntarily only by the heedful. Unless enforced, orders soon cease to be regarded as mandatory but as admonitory. This applies especially to sanitary orders, which new troops consider out of the line of proper military control, disregarding them where orders relating to purely military duty

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would not be so disregarded. The volunteer soldier rather resents sanitary orders as an infringement of his rights as an individual. Hence lack of discipline is reflected first and greatest in lack of sanitary observance. It is axiomatic that commands which lack discipline will be found dirty and diseased. Conversely, the opposite is true.

Medical officers cannot compel the soldier to observe sanitary precautions. The full coöperation of line officers and commanders alone can accomplish it, for sanitary discipline is part of a general disciplinary state.

A great aid to discipline in sanitary matters is to construe derelictions as offenses against the public. Such sentiment should swiftly follow a sanitary fault. If the act or omission is one whereby disease is introduced or spread, it may not only destroy the lives of some and jeopardize those of all, but diminish the efficiency of the force as a whole. Yet such serious offenses have been punished far less frequently and less severely than ordinary misdemeanors. Many sanitary offenses, when detected, have been belittled, glossed over, or allowed to pass without official action.

The punishment for offenses against public health should not only be certain but adequate.

The following is an illustrative general order, concerning sanitation which is yet in force. To meet local conditions, the division surgeon should if need be call attention to such of its provisions as are of urgent importance, and recommend such additional detailed measures for their enforcement, as are appropriate.

General Orders,
No. 45.

War Department,
Washington, September 11, 1916.

The following sanitary regulations are published for the guidance of all concerned:

1. **The Division Surgeon.**—The division surgeon is charged, under the commanding general, with the general conduct and supervision of the Medical Department of the division, in the performance of its duties and will make recommendation concerning all matters pertaining to the sanitary welfare of the command.

2. **Sanitary Inspector.**—The sanitary inspector is assistant to the division surgeon and is charged especially with the supervision of the sanitation of the command to which he is assigned. It is the duty of organization commanders to remedy defects reported to them by the inspector.

3. **Water Supply.**—Precaution must be taken to prevent contamination of the camp water supply by keeping all containers scrupulously clean and protected from dust and other sources of infection.

An appliance carried on the supply table as "Water Bag, Field, Sterilizing," consists of a canvas bag of specially woven flax, 20 inches in diameter and 28 inches in length, sewn to a flat galvanized iron ring, hinged so it folds at one diameter. Spliced at four equidistant points on the ring are two crossed pieces of hemp rope, enabling the bag to be suspended on any convenient support capable of holding the weight of the bag when filled with water, which is about 330 pounds. Five nickel, spring faucets are placed at equal spaces about the bottom edge of the bag. The neck of these faucets is small enough to enter a canteen, which can be filled in ten seconds. The self-closing faucets prevent wastage.

The purpose of the bag is not for transporting water, but to provide a stationary receptacle in which water can be held long enough to sterilize and then distribute it. The empty bag weighs from 7 to 7½ pounds and folds into a convenient package for carriage in the field.

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After the bag is suspended and filled with water, it is sterilized by the addition of a small amount of hypochlorite of calcium. This is carried in measured doses, sealed in glass tubes. A package of 60 of these tubes weighs 10 ounces and measures 7½ by 3½ by 4¼ inches. Packed in corrugated paper it will stand rough usage.

The tubes themselves are 3 inches in length by ⅜ of an inch in diameter and are marked with a file, enabling them to be easily broken in the fingers without fragments. They contain from 14 to 15 grains of calcium hypochlorite. This chemical contains from 30 to 32 per cent. chlorin, which forms in the water hypochlorous acid and results in sterilizing the water. The process is one of oxidation. In the strength used, waters highly infected are rendered safe. Of course, in such strengths (1–500,000) grossly polluted water, such as sewage, will not be rendered safe. Water ordinarily used will be entirely safe after being so treated. As the chemical acts more efficiently in clear waters a filter cloth, to be fastened over the opening of the bag and weighing 1 ounce, is provided, or water may be strained through a blanket. The bag is filled after it is in place. Suspended matter, such as clay, is largely removed and not left to interfere with the action of the chlorin.

Comprehensive experiments demonstrate the bacteriological efficiency of the appliance. The organisms causing typhoid fever, the dysenteries, including amœbic or tropical dysentery, and ciliates are promptly destroyed. Even in the vegetative form amœbæ are killed in fifteen minutes—ordinarily five to ten minutes suffices after the addition of the powder to render the water safe to drink. Exposure of thirty minutes has been found to destroy all amœbæ and ciliates under most severe conditions in a test.

4. Disposal of Garbage.—For detachments or companies in camps or in isolated locations where other means are not available, the incinerator will be installed.

If wood is plentiful and medium-sized stones can be obtained, both liquid and solid refuse can be disposed of by using incinerators improvised for each company as follows:

A pit is dug about 5 feet long, 2½ feet wide, and 6 inches deep at one end and 12 inches at the other; the excavated earth is banked around the pit and the latter is then filled with stones on which a fire is built; when the stones have become heated, liquid refuse is poured into the pit (shallow end), where it gradually evaporates; solid matter is burned on the fire.

The efficiency of this type of incinerator depends largely upon the fact that porous earth absorbs a very large part of the liquid slops, but it is not considered practicable to destroy the usual accumulation of slops every day without using an extravagant amount of fuel.

A type of incinerator having a fire bed of rock 1 foot deep will not permit the heat from the fire to penetrate beyond that depth. The rock wall on three sides of the fire bed absorbs much heat that otherwise might be dissipated into space, which increases the evaporating capacity of the incinerator enormously, and requires a comparatively very small amount of fuel. Incinerators built of large rocks are considered to be most efficient.

About one-sixth of a cord of wood per day per company is considered more than sufficient for the destruction of all slops and garbage if ordinary care and attention are given the incinerator. Liquid slops should be evaporated by being poured slowly along the vertical walls of the incinerator, not upon the fire bed, and the solid garbage should be placed on top of the fuel. It has been determined that a skilled attendant can destroy 100 gallons of liquids and 23 cubic feet of solid garbage in about twelve hours by using one-sixth of a cord of wood.

Where rock is not available, material (brick 340, lime three-fourths bag) will be obtained on requisition from the quartermaster. Where disposal in a sanitary way can be made by means of carts, the garbage can may be used. The cans will be thoroughly cleaned, scalded, and coated with crude petroleum after emptying.

5. Disposal of Manure and Care of Picket Lines.—All manure will be hauled to the camp dump. Picket lines will be kept broom swept, and all manure and straw hauled off daily. A weekly incineration of the picket lines will be accomplished with crude oil at the rate of 10 gallons to each line. Crude oil may be obtained from the Quartermaster Corps on usual requisition.

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6. **Disposal of Excreta.**—Where a water-carriage is not feasible, the Havard box will be used over the earth latrines. Daily inspection of this system is enjoined on the part of the medical officer of the organization, who will see that the following plan is carried out:

(*a*) The latrine will be burned out daily with crude oil and hay. (Each burning, 1 gallon crude oil and 15 pounds of hay or straw.)

(*b*) The boxes will be at all times kept fly-tight; this implies closure of all cracks, care of the hinges and a back construction so that the lids drop automatically. The latrine seats will be washed off twice weekly with a one one-hundredth solution of cresoline, or other disinfectant, and whitewashed inside twice weekly.

(*c*) When filled to within 2 feet of the top, latrines will be filled with dirt, their position marked, and new latrines constructed.

(*d*) Where water-carriage system is in vogue, either the automatic flush or trough system will be installed.

7. **Kitchens and Mess Rooms.**—Kitchens and messrooms will be securely screened and an efficient fly trap provided for catching such flies as gain entrance thereto. An effective fly trap consisting of a light wooden frame, covered with wire gauze, extending to about one-eighth of an inch of the floor of the trap, is readily constructed. It has been found that sweetened water slightly acidulated with vinegar is an excellent bait.

Ice boxes installed will be inspected daily and drip pans emptied and scalded out.

Garbage cans will be kept on wooden racks and elevated from the ground and cans burned out daily with oil to prevent fouling, and kept clean outside with a coat of whitewash.

8. Arrangements will be made for the installation of shower baths for all troops, and a careful inspection will be made daily to see that waste water therefrom is so disposed of as to prevent mosquito breeding.

9. The use of the mosquito bar is imperative, and it will be used in all districts where mosquitoes are prevalent.

10. **Food and Drinks.**—No food, drinks, or like commodities will be sold in camp except in the authorized exchanges.

Attention is called to the use of the following foods, the elimination of which from the messes will serve to prevent a variety of intestinal disorders.

(*a*) Canned milk and fish opened the day before. (Fish and milk poisoning.)

(*b*) Hashes of meats and potatoes prepared the night previous. (Ptomaine poisoning of severe type.)

(*c*) Locally grown green vegetables, uncooked. (Dysenteries and diarrhea.)

11. **Malaria.**—When malaria prevails, the daily use of 3 grains of sulphate of quinine, to be increased as indicated, as a malarial prophylactic is made compulsory.

12. **Inspections.**—Surgeons of organizations will make a daily inspection of the commands to which they pertain, covering the following: Picket lines, latrines, kitchens, barracks, inclosed toilets, baths, garbage receptacles, incinerators, and all food supplies; they will make a verbal report at once to their respective commanding officers for the correction of any sanitary defects noted, and a similar report, with the action taken, to the sanitary inspector on his next visit.

13. Special reports will be made at once by the surgeon of each organization to the organization commander and the division surgeon in the following cases:

(*a*) Acute infections or contagious diseases developing in barracks or camps.

(*b*) Cases of fever of 101° or over, attended with albuminuria.

(*c*) Unusual prevalence of mosquitoes in vicinity.

(*d*) Development of amœbic or bacillary dysentery or malaria in the command.

14. Venereal prophylaxis and venereal inspections will be carried out thoroughly, and the required monthly report of the number of new cases of venereal diseases will be sent to the division surgeon each month.

15. Areas about camps in which mosquitoes could breed, such as cisterns, tanks, woods, gutters, pools, and drains, will be kept under close observation by the surgeon, and the proper remedies applied, *i.e.*, screening, draining, oiling, etc.

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16. Sanitary squads composed of medical officers, noncommissioned officers, and privates of the Medical Department will be organized by the division surgeon. The sanitary squad will supervise and assist in the disposal of camp wastes. Civilians employed as sanitary laboreres will be hired by the Quartermaster Corps for the Medical Department.

17. **Flies.**—All possible breeding places of flies, accumulations of wastes and filth should be destroyed by incineration and particular attention given to the manure and refuse from the picket lines and stables.

An energetic campaign must be begun at once against the mature flies.

Each company or organization will provide itself with several large fly traps, to be placed near kitchen doors, store tents, and wherever flies are present.

INFECTIOUS DISEASES

Certain infectious diseases are of primary importance in military sanitation and will be mentioned briefly in the following notes:

Typhoid Fever.—Is caused by a specific organism, the typhoid bacillus. When the bacillus finds an entrance into man's intestinal tract, typhoid fever is likely to result.

The excreta, and particularly the stools and urine of the victim of typhoid, are loaded with the typhoid bacilli. Hence the necessity for extreme care in properly disposing of excreta and the strict avoidance of camp pollution.

Typhoid fever is chiefly a filth disease and one widely distributed over the world. Its presence in a camp or community is chiefly determined by the personal cleanliness of the occupants and largely by their method of disposing of human excreta.

Through careless means of disposing of feces and urine, water, milk, and food become infected, very largely through the agency of insects, principally the fly, which, breeding in accumulations of refuse, manure, and various forms of filth, transfer the disease germ mechanically on their bodies and in their secretions from the infected source to the food. Absolute protection of food supply of all kinds and persistent warfare on the fly are imperative.

The most common mode of infection in typhoid is by contact, direct and indirect, with the infected individual. About 60 per cent. of all cases are believed to be due to contact infection.

Direct contact infection follows intimate association with the infected person.

Indirect contact infection results from clothing, bedding, drinking cups, food, dishes, etc., which may serve to carry the infection from one person to another.

The necessity for great care as to personal cleanliness is obvious.

Frequent bathing, the washing of hands before eating, attention to laundering underclothing, and general personal cleanliness are obligatory, as well as the prompt sterilization of all articles which have been used by those suffering from the disease, as well as by "carriers," those excreting typhoid bacilli though presenting no active symptoms of the disease.

These "carriers" are an insidious menace, an even greater one than a frank case of typhoid fever, because so frequently unrecognized. The greatest precautions must be taken by medical officers for the prompt recognition, isolation, and treatment of these "carriers."

The regulations direct that all soldiers, immediately on entrance into the service, be protected against typhoid fever by vaccination as well as against smallpox. This regulation will be strictly enforced.

Malaria.—Is caused by a microörganism (Plasmodium malariæ) which gains access to the body through the bites of mosquitoes, belonging to the genus Anopheles.

The predisposing causes of the disease are those that favor the development of mosquito life.

On account of the nocturnal habits of the malaria-bearing mosquitoes, the disease is more likely to be contracted at night.

Camps should not be located near swamps, or in places where standing water favors

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the development of the mosquito. Every precaution will be taken to destroy these breeding places by draining and filling, or by oiling them and by the cutting away of all grass or undergrowth for a distance of 200 yards about camps and habitations, in order that the adult mosquitoes may not find lodgment and protection there.

Since the malarial mosquito is chiefly a night biter, the regulation requiring the use of the mosquito bar at night will be enforced and frequent inspections made to see that no evasion of this order occurs.

In certain conditions the use of preventive doses of quinine may be required, and administered by order under the supervision of the medical officer. All cases of malaria will be promptly isolated for treatment and protected from attacks by mosquitoes.

Yellow Fever.—Is transmitted by the bite of the yellow fever mosquito (stegomyia calopus).

Yellow fever is essentially a disease of the Tropics and its existence is entirely dependent upon the distribution of this single species of mosquito, small and silver-striped, active principally at evening time, and breeding generally in small accumulations of water close to the habitations of man.

The prevention of this disease, as in malaria, depends chiefly on the destruction of the mosquito and its breeding places, the proper protection against the bites of the insects, at all times, and the early isolation, protection, and treatment of each case of yellow fever as soon as suspected.

Cholera.—Is an acute infectious disease caused by a comma-shaped microörganism —the cholera bacillus.

These germs breed in the intestine of man and find their way into the mouth of another individual through the medium of infected water, milk, and food, or the germs can be conveyed by carriers, by flies, and by contact infection as in typhoid fever.

In every case this connection is certain and absolute. The disease extends in no other manner.

In the cholera patient practically the only infected discharge is the stools. It is, therefore, essentially a filth disease.

As in typhoid fever, contaminated food, dirty hands, flies, and infected clothing and bedding are frequent sources of danger. All the sanitary precautions used in the prevention of typhoid fever should be exercised, including the careful searching out of carriers, those individuals having the germs of cholera in their intestines and excreting them in their stools, thus scattering the infection and unknowingly infecting those about them and greatly assisting in the rapid spread of the disease.

These "carriers" in an infected district are often numerous, ranging in numbers from 5 to 10 per cent. of the apparently normal population in a community where an epidemic prevails. "Carriers" are specially dangerous if connected in any way with the handling of the food supply.

In cholera, as in typhoid fever, dysentery, and other so-called diarrheal diseases, great care should be exercised to provide that:

1. Only sterilized water is used.
2. Only recently cooked and properly served food is allowed.
3. All kitchens are screened.
4. All refuse burned and constant warfare made against the fly and its breeding places.

Anticholera vaccination has been proved an effective preventive measure also, but again, as in typhoid fever, the application of vaccination in these diseases does not lessen in any degree the responsibility or importance of rigidly enforcing all the general sanitary rules which have been here briefly stated.

Dysentery.—Under this head are included at least two severe specific diseases—bacillary dysentery and amœbic dysentery—each caused by distinctive organisms.

In addition there may be mentioned under this heading all the various forms of diarrhœa and colitis, characterized by colic, bloody stools, and tenesmus.

Some of these are undoubtedly of a nonspecific and temporary nature, due to chill or to indiscretions in eating and drinking.

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Prevention is the same as in typhoid fever and cholera, since there is no doubt that in the specific bacillary and amœbic dysenteries the cause of the infection leaves the infected man by his excreta, largely in his feces.

Attention is again directed to what has already been said, to the great importance of strict attention to the disposal of all excreta and wastes and to the careful investigation and protection of the water supply.

The three diseases—typhoid fever, cholera, and dysentery—may, from the standpoint of prevention, be considered as forming a well-marked group.

In all, the mode of departure from the infected man is in his dejecta; in all, it enters the infected man in food and drink, and in all three the fly very often provides the most important link.

Typhus Fever.—Is an acute infectious disease, caused by a specific germ, characterized by sudden onset, high fever, marked nervous symptoms, and macular eruption. It has prevailed in Mexico since the middle of the sixteenth century.

Typhus fever is transmitted to man only by the bite of the louse, which infests the body and clothing of the victims.

The prevention of typhus fever depends, therefore, upon personal cleanliness and the avoidance and destruction of infected lice.

Frequent bathing and cleansing of clothing, with repeated inspections of garments, particularly the seams where the eggs of the louse are deposited, are imperative precautions.

The body louse lays its eggs among and attached to the fibers of clothes with a special preference for seams and linings, a point to be remembered in the destruction of lice.

These eggs are the size of a small pinhead, yellowish white in color, goblet-shaped, and attached at the lower end to the cloth by a cement excreted by the female. They can be destroyed by boiling water or kerosene.

The avoidance of buildings, places, and persons known to be infected with lice is of first importance.

In case troops are sent into a typhus area, a railway disinfecting and bathing train will be provided and stationary plants of like character at the bases.

Smallpox.—All soldiers will be vaccinated against this disease on enlistment. Vaccination confers immunity against smallpox for a number of years.

Any case occurring among recruits will be isolated and contacts not protected by recent successful vaccination will be revaccinated.

Epidemic Cerebro-meningitis.—Preventive measures in this disease consist of prompt recognition, isolation, and treatment of the patient.

"Carriers" will be also carefully sought for and kept under close observation.

Measles, Mumps, and Scarlet Fever.—When these diseases appear in a command, all cases will be immediately isolated, all "contacts" inspected daily, and, where the diseases show a tendency to spread, a detention camp will be established where all recently arrived recruits will be detained under observation for a period of 12 days before being permitted to join their organizations.

Venereal Diseases.—The cause of these diseases is a matter of common knowledge. They are entirely preventable and the Government punishes those who expose themselves and contract venereal disease, by prompt stoppage of pay and restriction of privileges while under treatment.

All preventive measures prescribed by Army Regulations against infection of this character will be rigidly enforced.

By order of the Secretary of War:

H. L. Scott,
Major General, Chief of Staff.

Official:
H. P. McCain,
The Adjutant General.

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The following memorandum, published at the instance of the Division Surgeon, 12th Div., Colonel E. L. Munson, to control the spread of measles is equally applicable to epidemics of other diseases spread by discharges from the nose and throat, *e.g.*, cerebro-spinal meningitis, mumps, etc.

To all medical officers:

The first cases of measles to occur in Camp Wilson developed today. They were scattered, and apparently, the infection was imported from diverse sources in town, where it is understood there are a good many cases. More cases from the same outside sources must be expected—but the prompt and energetic measures will prevent cases developing in the camp from generally infecting the camp and causing an epidemic outbreak. The following instructions embody the essentials of prevention which should be strictly carried out.

Directions for action by regimental surgeons in case of occurrence of measles:

1. Report case in writing to division surgeon by special messenger.
2. Send case to base hospital at once.
3. Quarantine all members of the tent squad in their tent, until they can be sent to the measles detention camp.
4. Disinfect all clothing, bedding and equipment of the case. Those of contacts will be disinfected at the measles detention camp, to which they will accompany the contacts.
5. When the tent squad is ordered to the quarantine camp, send tent with the squad.
6. Take a census of the regiment, beginning with the infected company, to determine which men have had measles previously and which had not. Note the date when any previous attack of measles is said to have occurred.
7. Pay especial attention to catarrhal conditions in persons not having a previous measles history and hence presumably susceptible to it.
8. Have all cases of coughs and colds promptly reported to the surgeon. Look up their measles record. In the presence of a measles outbreak, such cases in admittedly susceptible individuals are highly suggestive. Take temperature several times daily in such cases, watch the early symptoms and examine frequently for Koplik's spots. Cases of 101° temperature are invariably to go to the base hospital.
9. When in doubt about the diagnosis, send the case to the base hospital as a suspect.
10. Remember that measles is by far more contagious in the stage before eruption. It is most important, therefore, that the diagnosis shall be early as well as accurate so that the sources of danger can be promptly eliminated.
11. For practical purposes, measles is spread by contact. The saliva, nasal and conjunctival discharges are the source of infection. Warn the men of the command about lying on each other's beds or pillows and using towels, pipes or other articles in common. Warn them to wash their hands frequently so as not to convey any infection thereon to their air passages.

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See that there are no common drinking cups. See that the water is boiling in which the mess kits are cleaned.

12. See that tents are properly ventilated, their canvas is looped up every fair day, the bedding taken out and spread around so that sun and air can have full access to it. Spitting within tents should be strictly prohibited.

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CHAPTER IX

THE EVACUATION OF SICK AND WOUNDED

The system of the evacuation of the wounded is the basis of the entire medical service in the field. The present system devised by Letterman during our Civil War, and since adopted essentially by all armies is that of passing wounded from front to rear by successive units, each of which operates in its own territory. Its operation is expeditious, but, like a bucket brigade at a fire, it requires a large personnel, and experienced coöperation to secure the best results. The failure of one unit nullifies the efforts of all the others. The chain is no stronger than its weakest link.

The organization provided for this function in our Army and its method of operation are discussed in the Manual for the Medical Department in Straub's "Medical Service in Campaign," Munson's "Sanitary Tactics" and Morrison and Munson's "Study in Troop Leading." This text considers certain general principles of the operation and a few lessons drawn from foreign armies.

The activities of the regimental surgeon, ambulance companies, field hospitals, etc., are considered also in the chapters on those subjects.

When the importance of evacuation of the wounded from the front to the base is fully recognized, no such calamities occur as those which existed in the early years of the Civil War, at Solferino or at Bloem-fontein. The importance of this service on the conduct of a campaign is illustrated by General Meade's contention that he did not follow up the advantage gained at Gettysburg because of his unwillingness to abandon his wounded.

Those who become incapacitated whether by disease or wounds not only hamper an army's mobility but impair the morale of the troops. If they suffer from infectious disease they endanger the healthy. Further, it is better for the sick and wounded themselves to be removed from the area of active operations and placed in fixed hospitals where they will be undisturbed.

The areas of activity are: (1) Zone of the advance, where sick and wounded are collected by regimental detachments, ambulance companies and field hospitals. (2) The zone of the line of communications, or evacuating zone, where disabled are removed by evacuation ambulance companies, trains, boats and ships, and where advanced depots, rest stations, laboratories and evacuation and other hospitals are maintained. (3) The area of the interior, where patients are distributed among hospitals, convalescent camps and homes, supplies are collected in depots and general administrative functions exercised.

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other battalions that suffered most lost 35 per cent., although the total loss of troops engaged was only 7.4 per cent. Similarly at Colenso some battalions lost 24.16 per cent. and 13 per cent. respectively, as compared with only 5.8 per cent. for all troops engaged (Simpson). Also, while the entire command may lose 12 per cent. during a day, a much higher per cent. may occur in some of its units in a short space of time, *e.g.*, a German fusilier battalion at Gravelotte lost 52 per cent. in twenty minutes. In open warfare these considerations affect the distribution of field hospitals during a battle, and emphasize the necessity of not opening all of them until it is known when and where the greatest number of casualties has taken place.

Casualties in the cavalry and artillery before the present war were about a third as high as in infantry. In the present conflict they are said to be higher than heretofore in artillery and much lower in cavalry. It is reported that one man in four in the British service in this war is wounded and that the Canadian forces which have lost more than any other British troops have had seven deaths per hundred for all causes in three years of war. Mortality was higher in the earlier part of the war than it has been recently.

In the French service the following figures concerning definitive losses (killed, prisoners or missing) are quoted by the Courrier des États Unis.

Battles of Charleroi and of the Marne, 5.41 per cent. of total effectives mobilized; first semestre of 1915, 3.39 per cent.; second semestre 1915, 1.60 per cent.; first semestre 1916, 1.47 per cent.; second semestre 1916, 1.38 per cent. Those killed in action and died of wounds have never at any time during the war exceeded 20 per cent. of the total casualties. Official statements of losses in the French Army show that losses due to death from wounds and killed in action have been eleven in every 1000 of mobilized strength at the end of 1916. These figures and those quoted above of German casualties present the subject from complementry standpoints.

The nature of the wounds varies greatly in this war from that in former conflicts and also varies in different armies, according to the quantity of the enemy artillery, etc. It varies from day to day in the same army, depending upon the amount of artillery employed, the occurrence of hand-to-hand fighting, etc. In the battle of the Marne 90 per cent. of the wounds of British troops are said to have been caused by artillery and during the year 1916, 60.8 per cent. of all wounds in the British forces were caused by that arm. The former statistics concerning the percentages requiring transportation have had to be revised. The percentages of killed and wounded given in the M.M.D. are as follows: killed, 20 per cent.; non-transportable, 8 per cent.; sitting transport, 20 per cent.; recumbent, 12 per cent.; able to walk, 40 per cent. It was estimated after former wars that a larger number could return unassisted than now appears to be the case. But in certain engagements the percentage that can walk is much higher; as a rule in inverse proportion to the amount of artillery fire. One writer on the Russian side in Manchuria estimated that 75 per cent. of

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the wounded could walk to the dressing station. Ross, as stated above, reported that 70 per cent. could walk. Follenfant, an observer in the Russo-Japanese War, estimated that 50 per cent. of the wounded could walk to the field hospital. The proportion of the Austrian wounded who could walk was less on the Russian than on the Servian front, because of the greater amount of artillery, and the larger rifle bullets which the Russians employed. The British field service regulations prior to this war estimated that 30 per cent. of the wounded would require recumbent transportation, 30 per cent. sitting transportation, 25 per cent. could walk and 15 per cent. would be unfit for removal. Simpson computed that of total casualties 25 per cent. would be fatalities, that of the remainder 16 per cent. could walk, 48 per cent. would require sitting transport, 12 per cent. recumbent transport and 4 per cent. should not be moved. A later British estimate published by Colonel Goodwin in 1917 is as follows, viz.: able to walk, 20 per cent.; requiring transport sitting, 60 per cent.; transport recumbent, 15 per cent.; untransportable, 5 per cent. Colonel Goodwin further states that of total casualties 20 per cent. will be killed, 10 per cent. will be slightly wounded and should be retained in the field medical units, 70 per cent. require hospital treatment further back. Of these last 70 per cent. should be treated in hospitals on the line of communication and 30 per cent. at the base. The "nontransportable" cases are taken to the points nearest them where they can receive suitable aid, *i.e.*, in the Eastern area they are usually treated at dressing stations, in the Western, if abdominal cases, they are sent to the units established for that special class of cases, and other nontransportable cases are removed to the casualty clearing stations, *i.e.*, evacuation hospitals. The estimate of those able to walk diminishes as one goes down the line of communication, for the slight cases, *i.e.*, those able to walk, remain near the front.

There must be disciplinary control of the slightly wounded, otherwise uninjured men may seek to leave the ranks (*e.g.*, on the pretext of carrying a wounded man's equipment). There are but two points where this control may be exercised; one immediately in the rear of the unit, the other is the dressing or lightly wounded station.

Two factors may cause delay in evacuating the wounded after a battle; one is the amount of administrative work in connection with each wounded man, and the other is the necessity of collecting his arms and equipment. As the patient may shortly return to duty his arms and equipment in certain foreign services accompany him, though his progress is retarded thereby. In the Austrian service a wounded man who brings back his rifle is paid one dollar for it. It is believed that a certain number of wagons should be sent to the station for slightly wounded, dressing, station, etc. for the sole purpose of collecting arms and equipment of slightly wounded men proceeding on foot to the rear. The collection and removal of the wounded must begin as soon as possible and continue until completed.

The number of casualties and where they are occurring should be reported frequently from regimental headquarters to division headquarters

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and thence to army headquarters. Usually such reports are made by telephone by the commanding officer of the lower unit to the adjutant general of the higher.

A formula to be employed in reckoning the number of vehicles, etc., that should be employed to remove wounded has been developed and applied as follows by Simpson:

$$M = \frac{W \times t}{T \times n} \quad . \tag{1}$$

in which M equals the number of vehicles that should be available, T the time allowed for evacuation, t the time taken to make one round trip, W the number of wounded and n the number of disabled which one vehicle can carry. This formula gives the amount of transportation necessary. Another formula is:

$$T = \frac{W \times t}{M \times n} \tag{2}$$

which gives the time in which the movement may be made.

In determining the number which a vehicle can carry consideration must be given to the respective numbers that can be transported sitting or recumbent, and the probable number of patients requiring each class of transportation. To take a concrete illustration of the use of each: one thousand sick and wounded are distributed as follows: 300 in the field hospitals of one division, 200 in its evacuation hospital and 500 in advanced stationary hospitals. They must be evacuated to base hospitals down the line in three days. The railway line runs as far as the evacuation hospital, and the distance between it and the field hospitals is 10 miles by road. One-fifth of the patients must be carried recumbent, four-fifths sitting up. Ambulances, general service wagons, and country carts can be made to carry four recumbent or twelve sitting, and can make only one return journey during each day. (This is in fact an overestimate and is utilized here purely to simplify this problem. A general service wagon can only carry, as a maximum, nine sitting or three recumbent.)

Two trains carrying 100 recumbent or 400 sitting are being used, and can make the return from the base to the evacuation hospital in one and one-half days and to the advanced stationary hospitals in one day. With regard to these trains, it is evident, without making use of the formula, that one train for 100 recumbent and one train for 400 sitting will clear the advanced stationary hospitals and be able to return to the evacuation hospital by the second day, and that these two trains should be able to evacuate the patients in the evacuation hospital, plus the 300 brought to it from the field hospitals on the second and third days. The only calculation to be made therefore will be the number of vehicles required to bring 60 recumbent and 240 sitting from the field hospitals to the evacuation hospital by the third day, *i.e.*, in three journeys of the vehicles. The calculations, using the formula, should be as follows:

(*a*) For recumbent cases $\frac{60 \times 1}{3 \times 4} = 5$ wagons. Applying formula (1)

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(*b*) For sitting cases $\frac{240 \times 1}{3 \times 12} = 6.6$ or 7 wagons. Applying formula (2)

Total wagons required 12.

This is a simple example of one form of calculation, but it can be used of course to deal with any form of transport material.

As an example of the second formula take the case of 2000 wounded in the field hospitals of a division immediately after a battle; and of 10,000 in the evacuation hospitals belonging to several divisions, awaiting transfer down a railway line to the distributing zone. Three hospital trains each capable of carrying 100 recumbent patients are available with a return journey period of three days from and to the evacuation hospitals. One ordinary train carrying 400 sitting is available to run at a fixed hour daily from the evacuation hospital.

Let it be postulated that there are available thirty ambulances, each carrying four recumbent and able to make one return journey daily from the field hospitals to the evacuation hospital and in addition fifty local vehicles have been collected which are each able to carry twelve sitting cases also making one return journey each day. One-fifth of the wounded in the field hospitals are slight cases and can go on foot as far as the evacuation hospitals only, one-fifth of all the wounded require recumbent transport at all stages, three-fifths require sitting transport as far as the evacuation hospitals and four-fifths on railway trains from the evacuation hospitals. How long with the material available will it take to clear the area of operations of its wounded?

(*a*) The number of recumbent cases to be removed from the evacuation hospitals, including those brought from the field hospitals, according to the terms of the problem is therefore 2400.

$$10{,}000 + 2000 = 12{,}000$$
$$12{,}000 \times \tfrac{1}{5} = 2400$$

The formula therefore gives:

$$T = \frac{2400 \times 3}{3 \times 100} = 24 \text{ days.}$$

(*b*) The number of sitting cases to be removed from the evacuation hospitals is 9600.

$$T = \frac{9600 \times 1}{1 \times 400} = 24 \text{ days.}$$

(*c*) The number of recumbent cases to be removed to the evacuation hospital from the field hospitals is 400, using the ambulances only:

$$T = \frac{400 \times 1}{30 \times 4} = 3.3 \text{ days.}$$

(*d*) The number to be removed to the evacuation hospital from the field hospitals sitting is 1200 using the fifty local vehicles only (the remaining 400 go back on foot):

$$T = \frac{1200 \times 1}{50 \times 12} = 2 \text{ days.}$$

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Such a calculation would show that the difficulty of clearing the field hospitals is not so great as that of clearing the evacuation hospitals, and if it becomes necessary to clear the latter more rapidly, efforts would have to be made to increase the number of trains, to reduce the distance to the distributing zone, to collect vehicles and also to evacuate by parallel lines of roads, or if circumstances permitted, to reduce the number to be cleared by bringing general hospitals to the localities where the evacuation hospitals are located. Similar methods of calculation may be made for the use of boats and other methods of transport. Waterways as channels of evacuation are now much less used than formerly, but barges and hospital ships are employed on canals and rivers in both the Eastern and Western war zones.

During preparations for battle there are so many matters to be considered in connection with the removal of the sick and wounded that the Chief Surgeon of the Army, the Surgeon of the Base Group on the line of communication and the division surgeons should be taken into the confidence of their respective generals and called upon to submit drafts of the sanitary arrangements contemplated for promulgation in orders. Hospitals must be cleared as far as possible. In view of anticipated requirements the auxiliary transport should be collected at definite points under the direction of the division surgeon by whom they could be utilized as circumstances demand. The requirements of railway and water transport must also be estimated. Combat orders indicate in the last paragraph, some definite and well-known spot or spots, such as villages or prominent features in the landscape, to which the wounded who are able to go back unaided, can be directed to find their way. The location of field hospitals, dressing stations and stations for slightly wounded are given. If there is a railway line or navigable river near the anticipated area of fighting an appropriate point on it is designated as a collecting point. In preparation for night attacks it is especially important to select some definite spots, such as these, beforehand, with a view to directing not only the slightly wounded, but also the litter bearers and ambulances. The spot should be designated before dark, so that the troops may have some idea of its position. In trench warfare, the positions of the dressing stations, hospitals, etc., are already known.

The duties of the division surgeon in our Army are outlined in the Manual for the Medical Department.

In general, the duties of the division surgeon in the French Army concerning the evacuation of wounded are thus epitomized by Church:

BEFORE THE BATTLE

1. Collect at the division combat train the ambulances and sections of hospitalization, placed at his disposal by the surgeon of the corps, in order to send them at the proper time to the designated points.

2. To establish a divisional collecting point for the wounded unless the corps commander has already done so.

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3. To designate the field hospital, or unit, where the wounded shall be taken for treatment.

4. To make requisition, through the quartermaster (vaguemastre), for all available transportation for the wounded of the division and notify the corps surgeon.

5. To so apportion this transportation that it may be promptly available for evacuation in case of a retreat.

DURING THE BATTLE

1. At the proper time, to notify the surgeons at the Postes de Secour and the field hospitals in action of the points designated for the slightly wounded.

2. Provide medical service at this point.

3. Advise Postes de Secour of the location of the field hospital.

4. When there is opportunity, employ the division group of bearers in clearing the battlefield and make use of automobiles to transport the wounded to the field hospitals.

5. Make requisition on the corps surgeon for additional transportation if needed. See that this is not unduly exposed to fire when it comes up owing to a possible change of front.

6. Make use of the personnel of units not busy to help at the hospitals.

7. Request from the corps surgeon as many of the corps bearer group as may be necessary and advise him of the nature of the terrain and the most practical routes of evacuation.

8. Keep himself posted on the general situation and send word to his superiors. In case of check or retreat, to notify the corps surgeon of the units and personnel to be left with the non-transportable wounded.

AFTER THE BATTLE

1. To acquaint himself with the general situation: as to probable losses and as to what material must be replenished.

2. To report to the corps surgeon and the division commander and advise them of the hospitals it will be necessary to immobilize.

3. To designate the hospitals which are to be immobilized and send to them the necessary hospital sections.

4. Notify the other hospitals to send to the above their non-transportable wounded.

5. Arrange for the collection of the wounded by the divisional group of litter bearers and assign to each group the ground it is to cover and the unit it is to deliver to.

6. Ask for the corps group if necessary and assign them to their work.

7. Ask for the necessary transportation and especially for motor transport.

8. Hasten the release of the ambulances not to be immobilized,

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advise the corps surgeon of the formations necessary to replace those immobilized.

9. Take the necessary steps to replace expended personnel and material.

10. See that the transportation previously requisitioned is returned to the proper organizations.

11. See that the division bearer group is ready to follow in case of an advance.

The work of removing wounded during actual fighting must be left to a degree to the initiative of medical officers on duty with regiments and those commanding the ambulance companies. Higher administrative medical officers are concerned in the opening, closing or moving the dressing stations and field hospitals and to the maintaining of their evacuation service. They order hospitals and ambulance companies as occasion requires to the parts of the line where they are most needed.

A fairly steady inflow of sick occurs at all times. By some it is estimated at 0.3 per cent. daily, but it may be, of course, higher or lower according to the presence or absence of epidemic diseases. About 70 per cent. of an army becomes incapacitated for a few days or longer during the first year. The percentage, 0.3 per cent., seems high, but the majority of the cases are of a trivial character, requiring only from two to five days care. Thirty per cent. require treatment for three or four weeks in hospital on the line of communication. This percentage of admissions for sickness may be increased on the eve of an engagement. Colonel Goodwin states that the percentage diminishes among English troops in the first trenches when action is expected. Whether it is necessary to remove these patients as far as the line of communication must depend upon the military situation at the time.

One difficult problem is the disposal of cases of infectious disease during an epidemic. The necessity of removing and isolating these cases from the healthy troops is paramount. How far from the area of active operations such removal should be effected, must depend upon the military situation at the time. As a rule, it should be to a point immediately behind the evacuation hospital.

The proportion of the command which will require hospital accommodation is determined by too many factors, *e.g.*, size and issue of battles, presence of epidemics, etc., to justify definite preliminary estimation.

From a review of the literature prior to 1914, Mulligan concluded that at the outset of a campaign there should be accommodation for 10 per cent. of the command, and that subsequently this should be increased gradually to 20 per cent. Longmore estimated that 5 per cent. was adequate at the outset. In the Philippines, General Greenleaf made provision for hospital accommodation for 15 per cent. of the command, an estimate which events proved was most judicious. This did not consider, however, the accommodation necessary in the continental United States. In Austria in 1916 hospital provision, it was reported, had been made for 33⅓ per cent. of the troops at the front.

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The British maintain 1,000,000 beds and the French 650,000. The hospital facilities ordinarily provided in times of peace for the U. S. Army and for 3 per cent. of its strength.

The War Department authorizes the following:

Provisions for caring for the health of the soldiers now being made by the Medical Department include the construction of 32 hospitals at National Army and National Guard camps, the enlargement of some 30 hospitals used in connection with officers' training camps, taking over or construction of at least two general hospitals at ports, increasing the size of two other general hospitals behind these, and the building or taking over of a number of general hospitals to be used for special treatment work. Efforts are being made to secure hospital buildings ready built, but some will probably have to be constructed. A number of sites have been offered.

A further step to be worked out is the provision of reconstruction hospitals, where artificial limbs will be made, repair surgery done, artificial limbs fitted to patients, and re-education of cripples begun, to enable them to use the artificial limbs provided and again become useful members of society.

The aim of the Medical Department is to have hospital provisions for 5 per cent. of the enlisted force and to extend that to 10 per cent. Abroad facilities for 20 per cent. of the American expeditionary forces will be provided.

At cantonments hospital provision will be made for 3 per cent. of the troops at each camp. A complete modern hospital will be constructed at each, containing at least 1000 beds. With the space reserved for extensions, each hospital and its auxiliary buildings will require 60 acres. This allotment will leave generous space between the various buildings of each hospital. Hospitals at National Army camps will cost approximately $500,000 each, and at National Guard camps, where heating is not required, construction is lighter and sewer-connected plumbing not to be used, about $400,000. This will bring the total cost of the 32 hospitals to about $14,500,000. Each hospital will have equipment equal to that of the best institutions in the country, although the construction of the buildings will be of much cheaper quality.

One type is being used in all the hospital construction work done by the Army. All the buildings are 24 feet wide, the length varying to meet the needs. The wards are usually 157 feet long, which is the size needed for 32 beds. There will be a diet kitchen for each ward, a porch on one side and end of each ward, and a corridor connecting with the buildings on either side which will be covered in the case of the northern cantonments.

About 70 buildings will be comprised in each cantonment hospital on the 1000-bed basis. In some cases two wards are joined, thus reducing the actual number of separate buildings, but the number of buildings will reach about 70, counting each ward as a building.

Each hospital will have a well-equipped laboratory where bacteriological and pathological work can be done which any well-equipped hospital

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could handle. Some special blood tests will be made at the department hospitals, which will take care of any work that the divisional hospitals at the camps cannot attend to.

There will also be an infirmary for each regiment which will fulfill the functions usually performed by such institutions. There men not needing to be confined in hospital will report when any condition appears which demands watching. There vaccination will be done and the typhoid and paratyphoid preventative treatments administered.

Peace time estimates for the U. S. Army hospital facilities are based on a cost of $8 per man, but this cost was raised to $25 when the unit of which the man is a member goes into the war zone. This $25 pays only for the upkeep of the initial equipment, which includes regimental infirmaries, field and camp hospitals, ambulance companies, evacuation hospitals, etc. The initial equipment, itself, will average $29 per man, and extra equipment in the form of gas masks, trench sprayers, and oxygen apparatus, adds $23 more, making the outlay for each soldier, in hospital provisions, $77.

The evacuation of wounded by regimental detachments as discussed in the Manual for the Medical Department directs the establishment of an aid station at a protected point where a medical officer and the necessary personnel can render hurried care to the wounded. It is little more than a collecting point.

In the French service, Church states the wounded are cared for at and between the first line trenches and the aid station. They are dressed in the trenches and if there is enemy fire are kept in refuges near the trench, or in it until this ceases. The character of these refuges depends upon the character of the terrain. They afford good protection from artillery and absolute protection from rifle fire. Sometimes they are subterranean. At these points are kept small stores of dressings and other essentials. From such a point the wounded man is transferred to the aid station, usually by a tortuous communication trench. The many twists and sharp angulations necessary to protect this from enfilading rifle fire or more particularly shell fire have caused such a trench to be called a boyau (*i.e.*, intestine). Transport through these by the regulation litter is often impossible. To counteract this, some angles are shaved off, or short diverticula (crochets) are made, which will accommodate one end or the body of a litter while the other end is swung around to permit it to take a new direction. Wounded are often removed in wheelbarrows, hammock litters or in a folding litter. This last is so constructed that, for sitting cases one-third makes a seat, another third, a back, and the remaining third is an almost vertical support for the legs. The handles are shortened accordingly. This litter may also be so adjusted that it will carry a recumbent patient. At times the wounded can be carried back by routes screened from observation.

The communicating trenches are often a mile or more in length. The aid station is located at its rear end and is protected from artillery and

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rifle fire. At this point the regimental surgeon is stationed with a sufficient personnel to ensure the proper carrying out of his work.

It has been found that regimental litter bearers must be kept under more rigid surveillance by officers and noncommissioned officers than has been practised heretofore, and that much more rigorous discipline is necessary in collecting wounded than that often employed in detachments of sanitary troops. Unless this surveillance and discipline be exercised, wounded will be collected slowly and those that lie at dangerous or relatively distant points will be left until the last. Those most exposed or most distant may not be recovered for five or six days. The wounded, under such circumstances, are always gathered slowly and exactly in the inverse of the proper order.

A litter squad requires one hour to carry a patient one mile and return.

In the British service, in the present war, the regimental surgeon establishes his aid station in a dug out near regimental headquarters, also near the main communicating trench to the rear. It is usually about 1000 yards behind the front line trench. In action he accompanies the regimental commander. He directs such wounded as are able to go back to the aid station and to take advantage of such cover as possible. The wounded unable to move are placed in any shelter available, shell craters, etc., and first aid given as rapidly as possible. They are cared for and removed by the stretcher bearers of the ambulance company. The regimental surgeon continues to keep in touch with his regiment. Whenever possible he communicates by telephone or messenger (often a slightly wounded patient) with the ambulance company.

The duties of the corps surgeon in the French service are in reality those of the division surgeon save that he has a larger scope and must deal in corps, rather than in division figures. He is responsible for the working of the units in his corps and is accountable to the director of sanitation of the army and also to his superior, the general commanding the corps. With the latter he is constantly in touch, ready either to furnish information or to receive orders.

Ambulance Service.—Ambulance and bearer service during and after a battle are discussed in the Manual for the Medical Department and by Straub's "Medical Service in Campaign." The litter bearers can work in only a limited area. They should be supplemented if possible after a successful engagement by organized groups of litter bearers from the civil population, after the enemy has retired. Such bearers were much used in Manchuria, South Africa and the Philippines, but have not been much employed in the Western zone in the present war.

For the evacuation service our army has four ambulance companies, an evacuation ambulance company, four field hospitals, two evacuation hospitals and base hospitals, as needed for each division. The three first mentioned units may be motorized or animal drawn.

The organization of the ambulance company and field hospital are given below (extract from tables of organizations). The organization of

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the evacuation ambulance company is described in Pars. 804 to 812, M.M.D., 1916. Motorized units are odd numbered; animal drawn are even numbered.

	Motor-driven ambulance company	Animal-drawn ambulance company	Motor-driven field hospital	Animal-drawn field hospital
Major	...	...	1	1
Captain and First Lieutenant	5	5	5	5
Total commissioned	5	5	6	6
Sergeant, first class	2	2	3	3
Sergeants	11	11	6	6
Corporals	6	6		
Horseshoer	...	1	...	1
Saddler	...	1	...	1
Farrier	...	1	...	1
Mechanic	1	1	1	1
Cooks	3	3	2	2
Privates, first class, and Privates	96	124	68	65
Total enlisted	119	150	80	80
Aggregate	124	155	86	86
Motor ambulances	12			
Motor trucks	3	...	11	
Motorcycles	3	...	2	
Ambulances	...	12		
Wagons	...	4	...	7
Horses, riding	...	28	...	22
Mules, pack	...	4		
Mules, draft	...	66	...	30

The divisional and supply wagons, returning empty, but packed with straw are depended upon to an appreciable degree on the Eastern front for removal of wounded. On the Western front they are not so largely utilized. They have proven of greatest value where roads are difficult for motor transport, when this is inadequate, the field hospitals at a long distance (20 miles or more) from the front and the number of wounded great. Wagons can carry nine sitting or three recumbent if not on litters. Ambulance companies should be able to rejoin the hospital they serve within twenty-four hours. When transportation is inadequate, consideration must be given to the coördination of the supply and evacuation services. In South Africa the Canadian contingent employed for the transport of its field hospital, vehicles that could be converted into ambulances. The daily inflow of sick can usually be cared for by returning supply wagons or by vehicles commandeered locally.

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Many types of motor vehicles have been employed for ambulance purposes, in the present war. Most of these are motor ambulances, some are vehicles converted into ambulances, but others have not been modified, *e.g.*, touring cars, motor busses, etc. One-and-a-half-ton trucks can carry three recumbent and two sitting or eight recumbent. Three-ton trucks can carry eight recumbent (not on litters) or sixteen sitting. Motor busses can carry 75 per cent. of their licensed capacity, or if specially equipped, four recumbent and eleven sitting. Motor vehicles with solid tires should not carry sitting cases faster than 10 to 12 miles an hour or recumbent cases faster than 3½ to 4 miles per hour.

The employment of motor vehicles in most continental European counties was facilitated by annual governmental subsidies to motorists in time of peace for use of their cars in time of war, and by prearranged plans for the changes that would be advisable in each type of vehicle.

The animal-drawn ambulance is by no means obsolete. On the Western front these vehicles are of the greatest value when roads are very muddy or damaged by shell. Wheeled litters propelled by hand are used where other vehicles cannot penetrate. On the Eastern front the light peasant wagons packed with straw have been used to evacuate wounded for long distances, *e.g.*, from Przemysl to railhead at Jaslo, 50 miles away. These wagons, commandeered in great numbers, were said to be more comfortable and serviceable than ambulances, as they did not jar so heavily as did the latter, and could go where the heavier ambulances could not.

In the British service three ambulance companies, A, B and C are provided for a division. Each comprises the bearer and motor sections. The former now consists of 3 officers, 3 noncommissioned officers and 108 litter bearers, who carry 27 litters. The wheeled transport consists of 50 ambulances, 4 touring cars, 8 motorcycles and 4 trucks including 1 for workshop and repairs. This does not include 7 motor ambulances and 3 horse ambulances with each of the 3 field hospitals with a division. The work of removing the wounded begins immediately after an engagement opens and within five minutes thereafter, Colonel Goodwin states, the bearer division is at work immediately in rear of the firing line. They come up as the attack goes forward and keep in as close touch with the firing line as possible, performing many of the duties in first aid and collection of wounded, which, in our service regulations are usually assigned to the regimental personnel.

Dressing Stations.—From the aid station the wounded are removed to the dressing station which is the point furthest forward to which vehicles can be brought. Usually this is about ¾ mile from the front in the Western war zone. Here the bearers load the patients into the ambulances and take from them a corresponding number of empty stretchers. At these dressing stations wounds are redressed if necessary—splints are adjusted, 500 units of tetanus antitoxin administered to each wounded man and refreshments and morphia given if necessary. Dressing stations and the ambulance companies operating them are discussed in the Manual for the Medical

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Department (Pars. 667 to 690) and in the chapter on Ambulance Companies in this book.

Dressing stations are not established as a rule until the action develops, and one or more are held in reserve if possible to meet emergencies. The location of each is published in orders. Its site is as far forward as possible where it is protected from direct infantry fire. It is on or near a road from front to rear, near water, at a distance from artillery and not in or near woods. Each station serves a certain area and is not moved until it has fully discharged its function. If possible it occupies a building. In the British service, patients who will not recover in two or three days and who are untransportable are sent to the field hospital or to units for abdominal cases, cerebral cases, etc., according to circumstances.

Slightly Wounded Station.—A station for slightly wounded is provided in our service for each division. See Pars. 710 to 715, M.M.D. It is located at a spot designated in orders some 5 or 6 miles in rear of the firing line and is provided especially for the reception of the ambultant wounded. The British service has a similar station—the divisional collecting station—to which the wounded congregate. In the British service this station has a definite organization, transport and equipment. In our service these are determined by circumstances.

Field Hospitals.—Field hospitals are discussed in Pars. 691 to 709, M.M.D.

Several foreign armies provide special field hospitals for service with cavalry. Such a unit of the British service consists of two sections (A and B) each consisting in turn of a bearer and tent division. The bearer division consists of twenty-two officers and men of the R.A.M.C.; the tent subdivision of sixteen; and then are added twenty-one rank and file of the army service corps.

Transportation consists of 78 horses (66 draught and 12 riding); six light two-horsed ambulances carrying two lying or eight sitting; four heavy six-horsed ambulances, carrying four lying or twelve sitting or two lying and six sitting; two forage carts; three general service wagons; one cook's cart; two water carts; two bicycles. The heavy ambulances have now been largely replaced by motor ambulances—four to a division.

Tentage is provided for 50 patients.

Four such units are allotted in a cavalry division and one to a mounted infantry brigade.

The light ambulances are distributed among the troops and serve them. A collecting point is found when ambulances take over wounded and a dressing station may or may not be erected.

The function of a military hospital is very different from that of a civil one. The aim of the latter is the successful treatment of the sick and obtainment of an accurate scientific record of each case. No individual case has any claim to admission or treatment.

The only point which military and civil hospitals have in common is the aim—the successful treatment of those admitted. In the civil hospital the treatment is carried on for two motives, humanitarian and scien-

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tific. In a military hospital the added functions are; first, care (at a distance from the firing line) of all who would hamper the movements of the command; and second, return to duty of every man as soon as he is capable of bearing arms. The hospital system is essentially a part of the machinery of war. It is provided to promote greater military efficiency and is more than a humanitarian adjunct to a barbarous procedure.

In war there is constant pressure on the hospitals from the front. It is not, usually, the same at any one time on the different lines of communication and the provision of sufficient accommodation for the whole army does not by any means ensure that there shall not be excessive demands on one section. The great essential in administration is to keep the more advanced hospitals adequately empty.

There are only four rules for the conduct of a hospital at the front or near the head of the line of communication: (1) Every man fit for field service should be returned to duty at once; (2) every man that is not likely to be fit for the field in two or three weeks should be transferred to a hospital toward the base; (3) those fit for early return to duty but not yet recovered should be sent toward the base only on the eve of an engagement; (4) seriously wounded should be sent to the base as soon as they are able to travel. The further a man gets from his unit the more difficult it is to ensure his return thereto.

The administration and care of the sick of the hospital are two interrelated functions of the institution. They are not fully separable in practice for often they interdigitate, as in mess management, assignment of special nurses, detail of officers to those duties for which they have special aptitude, etc. Faulty administration will lessen the efficiency of a military hospital at least as much as will some falling off in the standard of professional treatment.

The main points of administration in military hospitals in the field are:

I. The maintenance, and, if necessary, the increase of existing accommodations. They should be determined according to the demands of the hospital, whether medical or surgical.

II. The distribution of subordinates to the best advantage, and their replacement when casualties occur.

III. Supervision of supplies. This considers the obtainment of adequate supplies, notation of the quantity and quality of those received in comparison with those actually needed, the prospective needs of the hospital, the maintenance in serviceable order of those on hand and their proper usage.

IV. Adequate cooking arrangements. This is a most important duty which should receive the frequent personal attention of the commanding officer.

V. General sanitation of the hospital; especially ventilation and air space per bed, character and amount of water supply, sufficiency and condition of latrine accommodations; drainage; lavatories; disposal of refuse; means of isolation of infectious cases, disinfection of their property, and disposal of all infectious material; hospital laundry.

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The following duties are peculiar to a military hospital:

1. Reception and despatch of convoys of sick and wounded, including in the latter case arrangements for the provision of transport.

2. Disposal of kits of patients and of their valuables and possibly the provision of clothing for the patients on their discharge.

3. The disposal of the arms and ammunition of the patients. These should not come to the field hospital but in fact they often do. They should be collected at the dressing station and thence transported in a wagon assigned for that purpose by the division quartermaster.

4. Receipt, custody, and preparation of all documents, pertaining to patients or the hospital personnel and the equipment and service of the institution. A part of these duties is the supply of information to the record offices of higher authority, and the office of that organization to which a man belongs.

5. Final decision as to disposal of sick and wounded. There should be a consultation in all doubtful cases.

The performance of these duties requires much clerical work. From 4 to 12 per cent. of the command are employed on it, according to the efficiency of those detailed to that duty, and the amount of such work required. In hospitals where there is much surgery or where many special nurses are required for serious cases, the proportion of the clerical force is relatively small, but in convalescent camps, etc., where there is much change in the personnel of the patients and their cases are slight, few nurses and many clerks are needed. About 12 per cent. of the medical department performs clerical work in most American field hospitals in addition to other duties. In German and Austrian hospitals it is about 4 per cent.

The personnel of the field hospital, on a war basis, should be increased at the expense, if necessary, of the hospitals at the base where civilian assistance is more readily available, or it should be supplemented by other special units, *e.g.*, those for the treatment of abdominal wounds. One medical officer can care for seven or eight patients hourly. When a field hospital is erected after the day's march, the detachment is sometimes too tired to attend to patients, properly. Either a larger personnel or reduced equipment or thorough acquaintance with drill is necessary for quickly establishing or breaking up of a field hospital in our service. Unless the hospital be erected quickly it will fail in one of its most important purposes.

Theoretically, every man who is sent to hospital should have a paper of some sort stating his disability. Practically some do not, especially after a severe reverse and it is therefore important that the convoy should be gone through carefully on arrival and distributed to the appropriate divisions of the hospital.

The treatment of a patient in a hospital at the front usually falls below the standard of treatment in civil hospitals because of difficulties, changed environment, etc. In the field, there are less comfort, fewer luxuries, and less available range in the provision of drugs and utensils that prove of

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value in special cases. There is also less opportunity for the usage of methods of treatment which have not yet become general. Mortality is inevitably affected to a degree by such conditions and by the mental state induced thereby. When relatively static conditions exist, as on the Western front, in the present war, these deficiencies are largely overcome. Large and elaborately equipped units are established well toward the front, but these pertain rather to the line of communication than to the mobile troops, and are comparable to evacuation hospitals. The same may be said of hospitals established for the treatment of abdominal wounds only.

The relative number of the surgical cases depends in greatest degree on the resistance of the enemy, while the absolute number of the medical cases depends on many factors, *e.g.*, care manifested by recruiting officers, the morale of the troops, duration of the campaign, efficiency of camp sanitation, etc.

During an engagement in the present trench warfare, field hospitals are usually from 1¾ to 3 miles behind the line in the British sector. They are placed as far forward as possible in order that wounded may receive treatment promptly. On the Eastern front they are sometimes nearer the front but more frequently 10 to 20 miles in rear. They are placed at these distances on the Eastern front as a rule, in order to be near a railway line. On the Western front they often function as but little more than elaborate dressing stations; on the Eastern, important operations are performed in all of them, though in the area of each army on that front one or more special surgical units with field hospital equipment are provided for the graver cases.

Buildings should be occupied if conveniently located. Readiness of access from the front and egress to the rear is the prime requirement. A site on a railway line or navigable river is highly desirable. Other desiderata are safety from direct fire, accessibility of wood, water, and straw, and sufficient space to allow for reasonable expansion. Their opening, closing and movement are determined chiefly by the military situation. Only those sections are opened, for which there is immediate or prospective need. On the march, only one section or tent is opened as a rule, if even that. When advancing to an attack, one field hospital may follow the advance guard and leave the road when this begins to deploy, while the others remain with the trains. They are opened as a rule successively as the issue of battle discloses itself. If the battle be won, and the enemy retires to a distance, the hospitals then move up and are placed where most casualties have occurred, in order to reduce transportation of wounded. During a defensive action all hospitals usually are in operation.

Not infrequently hospitals are shelled, if close to the front. This is usually attributed to enmity, but is more commonly due to the fact that they occupy buildings which furnish protection, and are large targets. Also the Red Cross flag is not visible ordinarily more than 2½ miles and is not visible to the enemy at all, in misty weather.

The evacuation of field hospitals is effected by evacuation ambulance

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companies, by ambulance companies, local vehicles and supply wagons. Whether more transportation is required than that furnished by the first mentioned depends upon the number of wounded, the length of the trip and number and capacity of the vehicles employed.

Evacuation Hospitals.—The evacuation hospitals are the foci of the entire collecting service in the field. Two of these are assigned to the line of communication of each division. Their organization, operation, etc., are discussed in Pars. 793 to 803, M.M.D.

The proper location and employment of the evacuation hospitals are among the most important duties of the surgeon of the advance group. In trench warfare they should be brought up as soon as the troops engage and opened at a suitable site (preferably on a railway or water line) some 6 to 10 miles from the front. The location is published in field orders. If possible they occupy buildings or erect portable huts. If these hospitals are not promptly available, clogging and immobilization of the field hospitals occur at once. The evacuation hospital must also afford adequate accommodation during intervals between engagements, because of the steady inflow of sick. When these units are unable to receive patients, the field hospitals are immobilized. This occurred in South Africa, when some field hospitals clogged by patients whom they could not dispose of promptly, were never able to rejoin the divisions to which they belonged. In trench warfare the evacuation hospital should be capable of indefinite expansion, but should retain only those lightly wounded, or too badly injured for further transfer until they can endure the journey without danger. These hospitals, however, should be kept as empty as possible in order to participate in a movement or accommodate an inflow of patients. In an advance they may move up to the field hospitals to take over their wounded on the spot. Adjuncts of some evacuation hospitals in the trench warfare on the Western front are said to accommodate 3000 wounded with a view to giving treatment to as many patients as possible promptly after they are hit. No fixed capacity is prescribed for these adjuncts as the needs of these units vary widely. The evacuation hospital itself does little professional work in the Western war zone. This is performed by adjunct hospitals associated with it. As our evacuation hospitals have no transport of their own there should be a complete understanding between their commanding officers, the commanding officer of the advance section, and the quartermaster department, from whom transportation is obtained.

Whether stationary, advancing or retreating, the function of the evacuation hospital remains the same—to clear the field hospitals and to promptly render whatever treatment is needed to all patients received. In the event of a reverse this last is often impossible. After the defeats at Lemberg the Austrian units corresponding to evacuation hospitals passed many wounded to the rear without any attempt at surgical interference.

Normally, however, in trench warfare, a large amount of surgical work is performed by these units in the French and English services. Practically all wounded are infected with anaerobic organisms in this war, and surgical

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aid must be both prompt and thorough. For that reason these hospitals are located near the front and are provided with all surgical conveniences.

In addition to the services of the evacuation hospital the surgeon of the Base Group is charged with provision of hospital trains and trains for patients, hospital ships or ships for patients, establishment of other necessary hospitals (*e.g.*, those for infectious diseases and for abdominal wounds), rest stations, sanitary squads, bathing and laundry establishments, depots, laboratories, etc. The service of the hospitals on the line is similar to that of the evacuation hospital. Rest stations are discussed in the chapter on "Voluntary Aid," while depots, hospital trains and ships are considered in other chapters.

The sanitary formations of the French Army which are found in the zone of communications dividing them into groups or echelons, are reported by Church as follows:

FIRST ECHELON

1. The dental hospitals or ambulances.
2. The surgical automobile ambulances.
3. Reserve personnel, mobile.
4. Reserve material, mobile.

SECOND ECHELON

At Railhead

1. Evacuation hospital section.
2. Depots for slightly wounded.
3. Temporary hospitals for nontransportable cases.
4. Reserve personnel.
5. Reserve material.

At Regulating Station

1. Evacuation hospital, and sanitary railroad trains and water convoys
2. Depot for slightly wounded.
3. Temporary hospitals.
4. Reserve personnel.
5. Reserve material.
6. Infirmeries de Gare.

In addition to the above, there is a divided interest in the supply depot, which is on the border line between the zone of the interior and the zone of the line of communication, the one supplying it and the other drawing from it.

The foregoing description of the methods employed for the evacuation of wounded is quite discursive, since it considers both general principles and some of the details practiced in several armies. It is believed that a more coherent description of this important function should be given, and also that such description should consider methods that have been employed for several years on a large scale in an allied army and are highly similar

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to ours, rather than our own which has not yet been fully applied. For this reason, the evacuation service of the British army is here described. That service, highly comparable to ours, has utilized important details which ours has not yet had opportunity to employ though fully provided for in our organization and regulations. The following text is taken almost verbatim from the *British Medical Journal* for Aug. 18–25, 1917. Fuller acknowledgment would be made but for the fact that the name of its author is unknown.

The nomenclature of British field units differs somewhat from ours. Their aid post corresponds to our first aid station, their field ambulance to our field hospital, their casualty clearing station to our evacuation hospital.

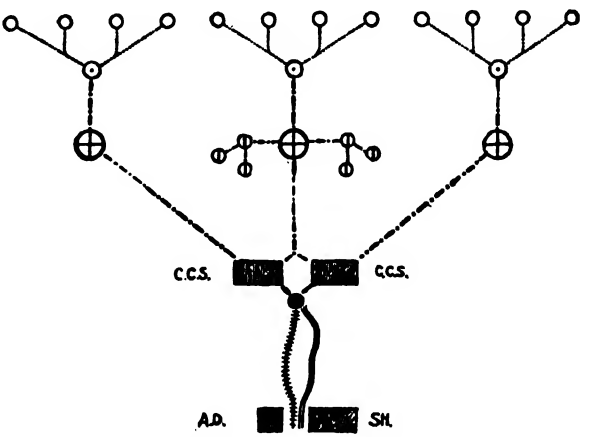

FIG. 9.—*Collecting Zone.* Diagram representing the distribution of the medical units. The plain circles are regimental aid posts. The circles with a dot in the center are advanced dressing stations, and those with a cross are main dressing stations of field ambulances. The circles with a vertical line through them are rest camps and other annexes to main dressing stations. The upper oblongs are a couple of casualty clearing stations connected by road with the field ambulances and with the base by a railway line and canal traversing the evacuating zone. The oblong below (S.H.) is a stationary hospital in the evacuating zone. Opposite it is an advanced medical supply depot (A.D.).

In theory, and to some extent in practice, the area in which the work of evacuating wounded has to be done is divided into three zones. The first or forward area is known as the "collecting zone" (Fig. 9). In it the wounded are collected from the battle-field, and the sick from the places at which they fall ill. Theoretically it is an area of the shape of a triangle, connected by its apex with the lines of communication, and having at its base the regiments in action; and nominally it contains only the regimental aid posts, the field ambulances, and a "casualty clearing station," or railhead hospital, which stands at the apex, and serves to house the sick and wounded sent on from the field ambulances until they can be passed down through the evacuating zone to the distributing zone. In practice, however, it contains certain other units of a medical character.

The next or middle area is known as the "evacuating zone," because it is traversed by the roads, railways lines, or canals along which the sick

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and wounded are carried on their way to the distributing zone. It corresponds with the military area known as the lines of communication, and, theoretically, is long and narrow, containing, from a medical point of view, nothing but the various means of transport, and perhaps a medical store or two and a few "stationary" hospitals for the reception of patients who should not be taken any further toward the distributing zone.

The third or lowest area is called the "distributing zone," because in it are placed the various institutions among which the sick and wounded are to be distributed to receive their final treatment. It is an area of indefinite size, corresponding roughly to that in which munitions of war are gathered and reinforcements collected, and which, from a purely military point of view, is known as the base. In this war it lies partly in Great Britain, partly overseas, and consequently it is common to speak of it as if it contained institutions of two different orders—"home hospitals" and "overseas or base hospitals."

The collecting zones in France may be regarded as divided into sections, each with its own line of communications and a railhead, for the front is actually held by different armies each of which has its own area of operations. Each such area is in medical charge of a senior medical officer known as Director of Medical Services (D.M.S.), who is responsible for the arrangements he makes only to the general of the army to which he belongs, and to the principal medical officer of the British forces—that is to say, the Director-General of Medical Services on the staff of the Commander-in-Chief.

In the collecting zone, even in parts of the area full of suggestions of the industries of peace, the dull booming of the guns is rarely inaudible, while a few miles further afield the road is encumbered from time to time by ammunition wagons, by ambulances, by fresh battalions going up to take their place in the line, or by battalions returning to their billets mudstained and worn. The hilltops, too, disclose a view perhaps of swiftly moving aeroplanes, a line of observation balloons, and the rising smoke clouds formed by bursting shells.

The various sections of this zone are each in charge of a director of medical services, who works through the deputy directors (D.D.M.S.) in charge of the corps into which every army is divided, and these again through the assistant directors (A.D.M.S.), who are responsible for the medical work of the divisions out of which army corps are constituted.

The number of men in a division is roughly 20,000, and to meet their needs each A.D.M.S. has at his disposition the personnel of three field ambulances, and twelve or more medical officers attached to single battalions or like divisional units.

BATTALION MEDICAL OFFICERS

The battalion or regimental medical officers do their work in a more advanced position than any others, and in some respects are the most important components of the whole medical service.

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Each is as it were the family medical attendant of the men of the unit, the medical officer of health of the locality in which it may for the moment find itself, and the private medical adviser of the commanding officer in respect of all questions in which medical considerations arise. He gets, or should get, to know the mental and physical peculiarities of every officer and man in his battalion—knowing, for instance, such things as who have dubious feet, who a nervous constitution, who are exceptionally hardy, who are careless in their living, who careful, who are disposed to go sick on the least excuse, who will never report themselves until positively obliged. He acquires this knowledge by going about among the men, by his formal medical inspections, and by noting who are the frequent attendants at his morning sick parades, and why they come. Bearing in mind that the sole reason why the men are in his charge at all is in order that they may fight, and fight effectively, he treats them much in the spirit of the medical attendant of a racing crew. Hence he is always endeavoring to tackle small evils early, and to winnow out the sick to whom he can afford all necessary treatment himself from those who must be sent elsewhere.

Everything that can in any way affect the health of his unit comes within his purview: food and its preparation, the purification of the water supplies, the provision of latrines and their proper maintenance, the destruction of rubbish, and the cleanliness of billets and dug-outs. He is always, too, on the alert for the first signs of an outbreak of any epidemic malady, wages war on parssites and flies, and endeavors to ensure that the men appreciate the importance of the various precautions they are told to observe, including those against trench feet. His authority he derives partly from his personal position, partly from his influence with the commanding officer of his battalion. If he secures the confidence of the latter, and the real respect of the adjutant and the sergeant-major, his work is, from one point of view, easy.

His duties are continuous, whether his unit be resting in billets or be taking its turn in the fighting line.

TRENCH WORK

If it be taking its turn in the fighting line he has also to attend to battle casualties and their evacuation, his precise duties in this connection differing according as trench fighting is in progress or an "over-the-top" advance.

In the former case he does his work from a predetermined point chosen according to the lie of the ground and other circumstances, at or sometimes close to the headquarters of one of the companies of the battalion or sometimes to those of the battalion itself. The former are likely to be in a dug-out or trench some two or three hundred yards behind the fire trench, and the latter perhaps twice or three times that distance (Fig. 10). Here he establishes a first or regimental aid post, equipping it with the ordinary provisions of a surgery, coupled with bunks or other lying-down accommodation for, say, half a dozen seriously wounded men (Figs. 11 and 12).

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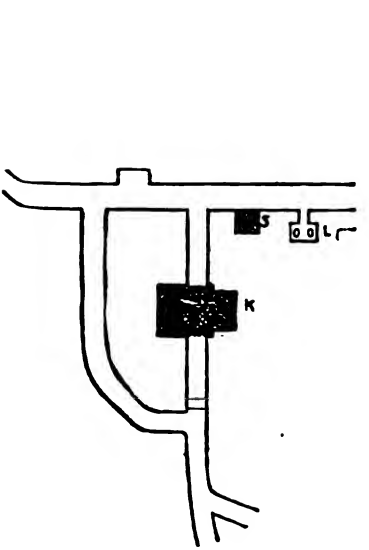

FIG. 10.

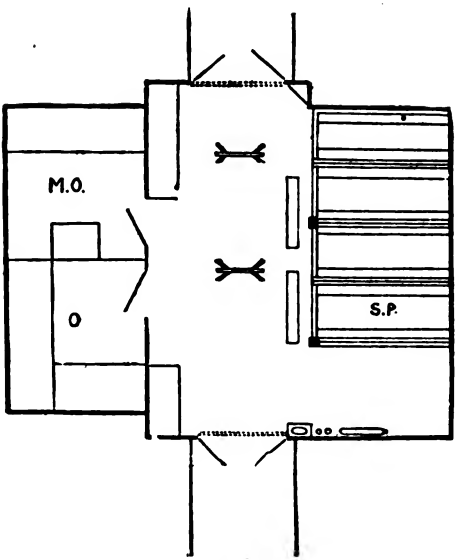

FIG. 11.

FIG. 10.—Map, drawn from memory, showing the position of a certain regimental aid post lying between a main and an accessory communication trench. The shaded block is the post itself. It stands across the trench, the patients approaching along the curved trench and leaving by the straight descending trench, which leads to the advanced dressing station. The ascending arm leads to and from the firing line. The projection (K) on the right is the aid post kitchen. The projection (L) is the latrine. The small shaded projection (S) is a dug-out for four stretcher-bearers.

FIG. 11.—Ground plan of a regimental aid post shown in elevation in Fig. 12. On the left (O) is a bunk for two orderlies, each having his stretcher bed; next is the M.O.'s bunk, with a stretcher bed and table. In the center compartment running from entrance to exit are trestles to support a stretcher while a case is being dressed, some tables and shelves for bottles and instruments, and two sitting benches. On the right is an empty space for storing the kits of patients, and beyond are slides, each to hold three stretcher patients, in tiers (S.P.). A curtain separates them from the center compartment. Gas-proof curtains are rolled up above the doors ready to let down on a gas alarm, and on the floor near the exit is a cylinder of oxygen and a spraying machine and some bottles of anti-gas solution.

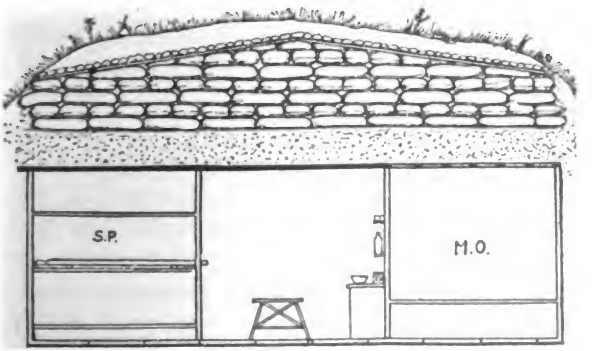

FIG. 12.—Elevation of the regimental aid post shown in Fig. 11. Tiers (S.P.) for stretchers for patients are seen on the left (one in position,) and the M.O.'s bunk and stretcher bed on the right. In the middle is a trestle to support a stretcher while the case is being dressed, and near it a bench for bottles and dressings. Sufficient height for work (about 6 ft. 6 in.) is secured by slightly deepening the trench, inflow of water being prevented by a dam and sump pit. The floor is concrete; the roof, concrete, sandbags and earth. Light is supplied by acetylene lamps.

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The aid post itself may be the cellar of a ruined cottage or house, a deserted German dug-out, or an ostensibly shell-proof annex to a communication trench, but whatever its nature the surgeon endeavors to guard his patients against a gas attack, providing for all openings a blanket screen soaked in an anti-gas solution which can be lowered into place at a moment's notice. Also, if the accommodation of the post be at all considerable, he takes what steps he can to divide it up in such fashion that no single shell is likely to affect all parts of it.

To assist him he has a corporal and four men of his own corps, their specific duty being to look after the water supplies; he draws from the battalion a lance-corporal, a driver for the small cart in which he carries about his aidpost outfit, and from each half-company one man whose specific duty is sanitation. The unit also supplies him with men to act as stretcher-bearers in the proportion of two to each half-company, or sixteen in all. His total command therefore consists of twenty-nine men, all of whom he

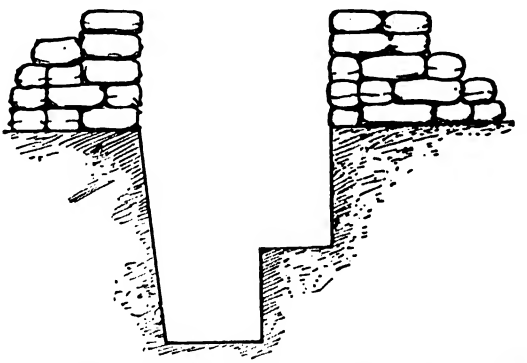

FIG. 13.—Diagram representing a section through a fire trench, measuring about 2 ft. at the bottom, about 4 ft. at the upper ground level, and about 6 ft. 6 in. from top to bottom. The shelf at the side, or fire-step, can be used as the foundation for a stretcher bed when the bottom of the trench is full of water.

trains in stretcher-bearer and first-aid work, but otherwise employs as he finds advisable. Subject to the specific duties mentioned he usually posts most of his men along the trenches held by his unit in order that they may be ready to attend the casualties when the cry "stretcher-bearers at the double" is passed from sentry to sentry.

The medical officer visits the fire trenches whenever occasion occurs, and often merely to encourage the men by the knowledge that, should they be wounded, skilled attention is at hand; his assistants are, however, competent in ordinary cases to apply the first-aid dressing which every soldier carries inside his tunic; if feasible, the wounded man is then removed to the regimental aid post. Consequently, it is here that the medical officer habitually remains.

If, however, the injury be a fracture of the lower limb or other serious condition, or the man cannot be brought back to the aid post forthwith, the medical officer goes up to see that the necessary steps are taken. These will always include the placing of the patient in some position in which he

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will be out of the way of the fighting men, while if the trench be waterlogged or the weather very rainy, and the patient helpless, it may be necessary to build him up a bed out of a stretcher on the fire step (Fig. 13), or elsewhere above the water line, protecting him from cold and wet by blankets and a water-proof ground sheet.

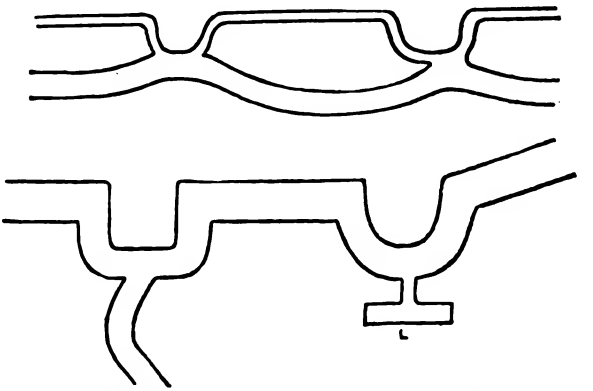

FIG. 14.—Above is a diagram diagram of a type of trench presenting special difficulties in moving wounded men. It is a twin trench of which the front one is never more than about 2 ft. wide and 4 ft. 6 in. deep. Below is an outline of a common form of trench with traverses projecting toward the rear. The straight parts are the fire bays. On the left is the beginning of a communication trench. On the right is a latrine (L) leading out of a traverse. Many of the angles of such a trench are worn away.

The difficulty of getting a case out of the trenches varies with its nature, with the amount of the fighting that is in progress, and with the character of the trench leading from the place where the casualty has occurred to battalion headquarters. A plan of a common type of trench is shown in Fig. 14. Should the communication trench have been knocked about re-

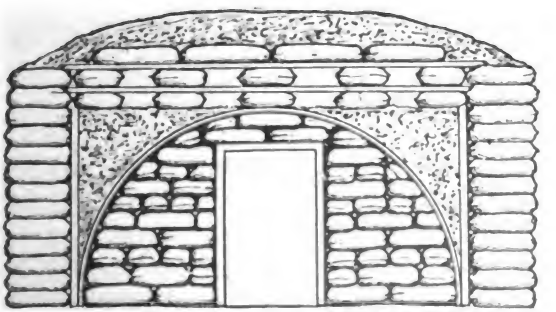

FIG. 15.—Front elevation of aid section.

cently or be waterlogged, it may not be easy even for an active and unloaded man to get along it, and in the best of circumstances the transport of a wounded man along the trenches is a problem presenting much difficulty.

Certain types of new trench (Fig. 14) may be nowhere wider than 24 in., while the average width of a fully developed trench is not more than 4 ft. at the level of the shoulders, and its course is invariably interrupted by

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angles round which an ordinary stretcher cannot be carried except by tilting (Fig. 16). Numerous special stretchers have been devised, and some of them meet their purpose if the communication trench is good, and es-

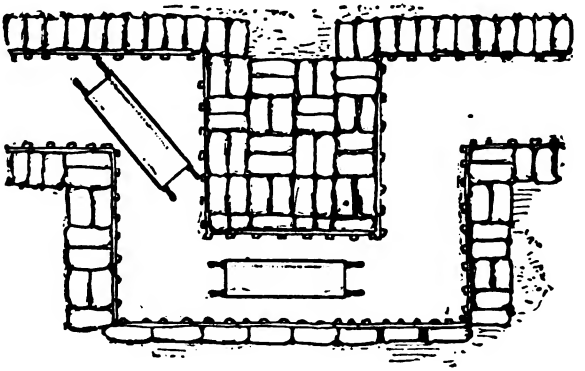

FIG. 16.—Diagram to illustrate the difficulty of getting a stretcher round the angles of a trench.

pecially if the trench in which they are being used be an old one and the corners of the traverses worn away.

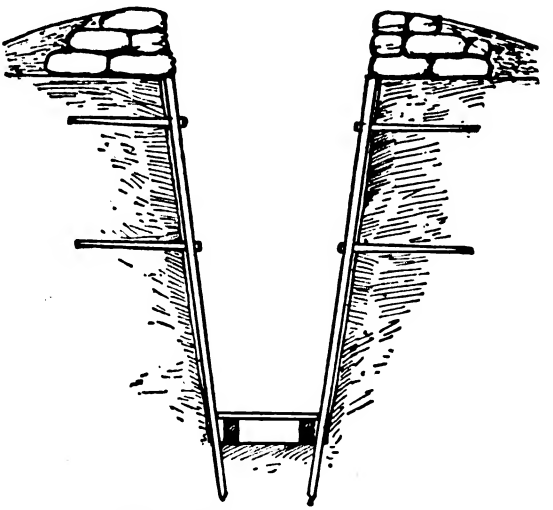

FIG. 17.—Diagrammatic view of a section of a communication trench dug in a part of the country where the subsoil water lies so low that only three layers of sandbags are required to secure protection from rifle fire for a man a little over six feet high. It has a boarded footway at the bottom, and the sides are lined with wire netting supported on spiked stakes. Although in perfect repair, its diameter at the bottom is only about two feet, and at the ground level about four feet.

Fig. 17 is a diagrammatic section of another type of trench in use where the ground water level is sufficiently low to allow a depth to be given to the trench sufficient to protect from rifle fire a man a little over six feet high.

There are, however, many cases, as also many trenches, in which the special stretchers are unusable, so it is common for the problem to be solved

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by lifting the patient on a blanket or on a stretcher over the parados or back wall of the trench, and carrying him to the regimental aid post over the intervening ground. Should the trenches happen to lie at the top of an ascent this is a relatively easy process, but otherwise it can only be carried out after nightfall unless the need for removal is so urgent that the risk must be taken of the patient and his bearers all being killed.

When the patient arrives at the aid post every care is taken to obviate shock as far as possible by the administration of morphine and hot drinks, and by protection from cold. A label is attached to the wounded man briefly describing the nature of his injury, and, if some time is likely to elapse before he can be removed out of the firing line altogether, a dose of tetanus antitoxin is given. The medical officer's outfit includes everything necessary for such purposes, as also for the arrest of hæmorrhage, the splinting of fractures, and the antiseptic treatment of wounds; but it is not expected or desired that he undertake formal operations.

WORK IN THE OPEN

If the unit to which he is attached be taking part in an advance, the duty of a battalion medical officer usually requires him to wait till the attack has been launched. As soon as he sees reason to believe that his battalion is holding its own, but that casualties are occurring, he advances with his men and hunts for a spot where he can establish a regimental aid post.

If the area over which the attack is to be launched is well known because previously occupied or successfully reconnoitred by aeroplane or other observation, the front-line maps prepared for the use of the headquarters of the battalion going into action or occupying the front trenches may indicate to the medical officer where he is likely to find a good place for his regimental aid post. Otherwise he must trust to his own judgment and enterprise, selecting a dip in the ground, an enemy trench, a mine crater, a large shell hole, anything that will serve to protect his wounded from direct fire; in any case it is, if possible, near a road. He starts as soon as possible, not only because his services are needed, but also because the enemy, as soon as the attack has been launched, is likely to try to cut off the arrival of supporting troops by a curtain of shell fire.

His regimental aid post having been established, and any patients that had been brought to it having been duly treated, the M.O. probably goes to see cases which his orderlies have found, but have not been able to move, or to which his attention is otherwise attracted. For these he does what he can, and if they cannot be moved to the regimental aid post on account of their condition or the heaviness of the fighting, he tries to collect them into groups, so that they can be found again easily and moved later on. If the area over which his battalion has been fighting is extensive, he perhaps leaves an orderly in charge of the larger groups. The whole of this work is highly dangerous, since, apart from being done under rifle fire, the artillery fire intended to prevent the arrival of supporting troops often affects the neighborhood in which the M.O. and his men are necessarily working.

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Of the men who are not so seriously wounded as to be unable to walk, a good many probably find their way straight to the rear after applying their own field dressings or getting them applied by a comrade. Others make their way to the regimental aid post, and there they remain with the stretcher cases until their wounds have been dressed and the firing slackens sufficiently to enable them to make their way to the rear.

The stretcher cases remain until ambulances come up to fetch them, and unless the fighting is very heavy. This process of evacuation will begin very shortly after the action itself; otherwise it is likely to be deferred until nightfall, when in any case a search will be made of the area over which the battalion has been fighting.

The medical unit lying next behind a regimental aid post is one of those whose functions, though not necessarily their organization, have been considerably augmented or otherwise varied since the war began, in accordance with local requirements.

Originally its main duty was to relieve of their sick and wounded the regimental aid posts, helping them also to clear the field at nightfall or whenever there was a pause in the battle, and treating the cases until it was possible to send them to treatment centers well away from the front. It had to serve in this way simultaneously three or four battalions, all presumed to be in action on an extended front, and the better to fit it for this work a field ambulance was made divisible into three sections, each capable of acting independently, and each again divisible into a stretcher-bearer subdivision for collecting the wounded and a tent subdivision for treatment of the patients.

In several of the localities in which the British army has been fighting during the last three years field units have, no doubt, been working on this plan, but in France the conditions have necessitated a modification of their work and also to some extent of their constitution. Each remains divisible as before, and each still possesses ten vehicles for the conveyance of wounded, but seven of these are now motor ambulance cars, replacing seven horse-drawn ambulance wagons, and of the nine original medical officers one has been withdrawn. Furthermore, though every senior medical officer of a division still has three field ambulances under his direct command for the work of his division, and each of these retains its capacity to work as an independent unit, he sometimes combines forces with the men of another division, or the field hospital ambulance companies of all the divisions of an army corps are in effect massed.

The duties they collectively perform are now practically as follows:

1. To collect the sick and wounded from battalions, whether these be actually fighting, serving as supports, or temporarily resting out of the line.

2. To decide what cases must be evacuated, and what shall be treated at the front.

3. To provide permanent treatment for those who fail to pass through the filter thus established, and for the rest temporary treatment pending evacuation.

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4. To pursue a like course in respect of local sick, that is to say, cases of illness or injury arising among the large number of men who never take part in the actual fighting, but whose presence just in the rear of the fighting line is essential to military operations.

5. To provide for the cleansing at frequent intervals of the persons of the men, the ridding of their clothes from vermin, and their disinfection when epidemic disease is in question.

6. To fill any gaps in the medical establishments of regiments, and to train medical officers and men for this work by sending them for a time to the battalions to see how regimental work is done.

7. To provide temporary assistance when needed to casualty clearing stations belonging to the army of which the divisional field ambulances form a part.

8. To establish advanced operating stations for immediate emergency operations, such as those required in cases of abdominal wounds.

9. To supplement the sanitary work of battalion medical officers when the battalions concerned are located in places which are out of the fighting line but not in direct charge of the sanitary staffs of the army of which the battalions form a part.

10. To do for divisions and corps any work for which provision has not yet been made by the army, and which requires for its performance the kind of scientific knowledge medical officers commonly possess.

It may be said, in short, of the British armies in France that their field medical units are the medical *bonne à tout faire* of the front.

No single field unit ever undertakes simultaneously all the duties mentioned, and the way in which they are allocated varies; for the environments of the divisions are not identical, and the senior medical officer of each of the armies and corps on the Western front (subject to orders from a higher authority) exercises his discretion as to the fashion in which he provides for the aggregate medical requirements of the troops in his charge. The experiences of medical officers of the units are therefore liable to differ, more especially if the period over which they are compared is relatively short. Commonly, whatever duties have to be performed are taken in turn by each field ambulance available, the period for which it remains employed thereon varying according to circumstances.

If a division is engaged in an active part of the line its evacuation work is usually sufficient to occupy the attention of all its field units, and the same is true of those of a corps when this is taking part in an advance or definite battle. In such cases the other duties are assigned to the ambulances (*i.e.*, hospitals) of reserve or other divisions.

In trench warfare each division engaged, generally makes its own arrangements for evacuation, the units belonging to it sometimes acting as independent units, sometimes pooling their resources.

THE ADVANCED DRESSING STATION

A section of the officers and men available is pushed up to form an advanced dressing station at some place within easy reach of the regimental

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aid posts of the battalions in action. They choose a place on or close to a road, so that the patients brought down from the battalion aid posts can be sent back rapidly from the advanced dressing station in wheeled vehicles

FIG. 18.—Advanced dressing station in the cellar of a partly ruined house.

to the place where the field ambulance headquarters or main dressing station has been established.

FIG. 19.—Diagram, drawn from memory, of the entrance end of a small "tube" above-ground advanced dressing station. It is built of curved sheets of corrugated steel surrounded by sandbags, earth, etc.

The advanced dressing station is always exposed to artillery fire, and though sometimes the crypt or cellar of a still standing but more or less wrecked building, such as a church or large school, may be available (Fig. 18) its habitation is, as a rule, merely an enlarged edition of a regimental aid

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post (Figs. 19 and 20). Its equipment and organization likewise resemble that of a regimental aid post, but are larger, because an advanced dressing station is rarely in touch with less than four regimental aid posts. To

FIG 20.—Leading down to a dressing station 30 ft. under the surface.

these it sends, as often as required, sufficient stretcher bearers to clear them of waiting cases, and if any considerable number of men have been left in

FIG. 21.—The overhead trolley for bringing the wounded through the trenches.

the trenches till nightfall, it helps to remove them, and retains them till they are fit to be sent further toward the rear.

The way in which it brings down its patients varies in different parts

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of the line and according to the amount of fighting in progress. Sometimes patients are hand-carried all the way down through a winding communication trench a mile or more long. Sometimes they are carried straight across country, though the latter is possible only at night or when the ground traversed is dead ground—that is, an area which cannot be reached by rifle fire, and not too much hampered by wire entanglements. There are also a few places in which the trenches have an overhead tram-rail, and the wounded men can be transported on a special ambulance trolley suspended from it (Fig. 21), and many areas are provided with tram-lines along which run for the greater part of the distance to be traversed small lorries capable of carrying two or four patients. There are others at which it is possible for the advanced dressing station to clear some at least of its battalion aid

FIG. 22.—A collection of wheeled stretchers and a motor ambulance.

posts by sending up a horse ambulance. The means most commonly employed, however, is a wheeled carrier, of which several types are shown in Figs. 22 and 23.

Once arrived at the advanced dressing station the patients are rested, fed and dressed, if necessary, and otherwise prepared to continue their journey, which in most cases will commence as soon as ambulance cars or wagons arrive from the field ambulance headquarters or main dressing station to fetch them.

ADVANCED OPERATING STATION

Commonly it is only by night that an advanced dressing station can clear the regimental aid posts with which it is in touch. In the case of an

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abdominal wound, however, considerations of risk from rifle and shell fire are set aside both at the regimental aid post and the advanced dressing station, and the patient is got down forthwith and sent to the rear in a special ambulance car, kept, if possible, for this purpose in a dug-out near the advanced dressing station, or summoned from the main dressing station or ambulance headquarters by telephone or messenger. The patient goes not to the main dressing station, but either straight to a casualty clearing station or to a field ambulance unit specially arranged for the instant performance of laparotomies, etc. Such a unit is called a corps or advanced operating station, and is established whenever the placing of a casualty clearing station within suitable distance of the part of the line concerned is likely to be delayed.

FIG. 23.—A wheeled stretcher, pneumatic tires.

VARYING CONDITIONS

The ambulance vehicles serving the advanced dressing stations almost always have to traverse roads exposed to shell fire, if not to rifle fire, and efforts are made in various ways to protect their occupants from further injury. When only trench warfare operations are in progress most of the work is done under cover of nightfall, though the depth of the darkness may be lightened from time to time by the flashing of guns, bursting of shells, and the soaring of rockets. The ambulance transport which comes up to fetch the patients approaches and leaves the advanced dressing stations, as it were, stealthily; and, after anything like a quiet day, two or three trips at most may complete the whole evacuation.

When, however, the division or corps is taking part in an advance or

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definite battle the reverse is the case. Hour after hour and sometimes for weeks there is a constant inflow of stretcher-borne men, and ambulance vehicles continually arrive to carry away the patients who have received the attention they require; on these occasions the only precautions taken are to keep at a sufficient distance apart so that no single shell shall have the chance of destroying two cars, and to travel sufficiently slowly to avoid jolting the injured more than is inevitable on the shell-pitted roads. It is commonly not until the battle has commenced that an advanced dressing station can take up its position, though the site may have been chosen in advance. As it must always be on a road, so as to ensure rapid evacuation yet never run the risk of impeding the military work in progress, the choice is often very limited. More likely than not it will be in a deserted trench or enemy dug-out, but it is always contrived so that the incoming and outgoing streams of wounded shall not meet, and that the more serious cases can be dressed separately from those that are slight. Provision is also made for cases which may have to be kept for some little time on account of their condition, and for protecting them from gas attacks.

DIVISIONAL COLLECTING POST

The majority of cases with which it deals are "lyers"—that is to say, men who reach it on stretchers. The "walkers"—that is to say, men who can find their own way to the rear—are usually shepherded off by patrols in advance of the dressing station to another field ambulance station known as the divisional collecting post, established when a big advance is in progress.

If the area over which the corps is fighting is wide, it usually establishes two advanced dressing stations and two divisional collecting posts in different parts of the field. The field ambulance medical officers at its disposition may be sufficient for this purpose, but in respect of stretcher-bearers it is always short-handed if the fighting be really heavy. Consequently on these occasions its own stretcher-bearers are reinforced from various sources.

If the troops in action are very successful and make a prolonged advance, an advanced dressing station may no sooner have established itself to its own satisfaction than it has to make a fresh move to get into close touch with the regimental aid posts.

It will be obvious from what has been said that work in and around advanced dressing stations, whether in trench warfare or in a definite battle, is attended by considerable risk. The fact that it is often exceedingly laborious may not be so apparent. If the fighting is at all heavy, the work as a whole continues without pause for many hours; and while the carriage of a full-grown man over a mile or so of rough ground is never a light task, it becomes absolutely exhausting when at each step the bearers have to drag their feet out of thick mud, and when their clothes, like those of the patient, are soaked with rain.

THE MAIN DRESSING STATION

The main dressing station is formed by the headquarters of the field ambulance or group of field ambulances responsible for the maintenance of

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the advanced dressing stations. As it is liable to have to retain the sick and wounded sent down to it for some little time, it is placed sufficiently far behind the advanced dressing station to be out of range of any but heavy artillery fire.

The exact nature of its work depends a good deal on local circumstances, including the character of the fighting in progress. Sometimes it confines itself mainly to administrative work—that is to say, to classifying the cases that arrive, and distributing them for treatment according to their requirements among subsections formed by itself or other units with which it is connected; sometimes it combines this work with actual treatment. However this may be, it always arranges to rest, dry, warm, and feed the patients that reach it, and for giving them any surgical attention they need before they can safely be sent on elsewhere. It is here, too, that all cases of wounds are examined to see that antitetanus serum has been given.

The first step is necessary because, despite the greatest possible care, the transport of a wounded man from the place where he has fallen to a place as far back as a field ambulance main dressing station must always be very trying, even if his wound be not very severe, and even if his clothes are not, as is commonly the case, soaked with rain and mud. The second step is necessary because in an advance the casualties are certain to be numbered by hundreds, and while many may not need to be sent away from the real front, operations and a period of real rest may be necessary in the cases of many others before their evacuation is possible.

Cases which require evacuation are sent to a railhead hospital or casualty clearing station, and whether their detention at a main dressing station be momentary or prolonged depends—assuming transport to be available—partly on their condition and partly on the distance to be traversed to reach a railhead hospital.

For other cases it provides sometimes by furnishing treatment itself, sometimes by sending the cases on to field ambulances or other medical units set aside for the purpose of special treatment. In every corps area, for instance, if not in every divisional area, provision is made by the field ambulances for the treatment of cases of trifling sickness and injury, or of men who are temporarily exhausted or footsore. Special arrangements are also made for the treatment, without evacuation, of more or less easily cured skin diseases, such as scabies, as also for the isolation of cases of zymotic disorder and of contacts therewith. Every army, too, has at its service, centers which deal with eye cases, dental disorders, and neuroses.

The object throughout is to avoid the unnecessary evacuation of cases that can be treated at the front, for a soldier, once evacuated, is likely, however quick his recovery, to be lost to his unit for a considerable time, since any patient sent further to the rear than one of the treatment centers mentioned above ceases for the time being to belong to the army in which he had previously been serving, and cannot be restored to it except by passage through a regulated channel. Every patient evacuated from a field ambulance has what is known as a field medical card eubstituted for his regi-

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mental label. It contains particulars as to his name and army status, a diagnosis of his condition, and details as to whether he has received the requisite prophylactic doses of tetanus antitoxin, and any other information deemed likely to be useful to those who will subsequently treat him.

The accommodation provided for a field ambulance main dressing station varies according to the amount of work that it has to undertake, and may be anything from a village school to a collection of tents. Such accommodation as it possesses is arranged in much the same fashion as at an advanced dressing station, but everything is on a larger scale and the equipment more elaborate. It is thus in a position to undertake formal operations, though it usually limits itself to those essential to a patient's safe evacuation.

The heaviness of the work varies in proportion to that of the units further up the line. If the latter have been hard pressed, many of the cases will reach the field ambulance untouched except for their field dressings, and, even if nothing else be required, special splints may have to be substituted for improvised appliances. On such occasions each corps commonly provides itself with two main dressing stations lying close together, but working independently, one dealing with stretcher cases, the other with "walkers." The patients of the former reach it in ambulance wagons or cars, while those of the latter commonly arrive in char-à-bancs which have been sent up to meet them as far along the road toward the scene of the fighting as these vehicles can be got. This varies, for when a big action is in progress the traffic on all available roads is very heavy, a constant stream of supplies of all kinds being essential to continued fighting.

MOTOR AMBULANCE CONVOYS

The field ambulances are responsible for the transport of sick and wounded from the advanced dressing stations to the main dressing stations, and also, but only when working in reserve or resting troop areas, for the conveyance of sick to the casualty clearing stations. The vehicles at their disposal suffice for these purposes, though it may be necessary to supplement them. Should the fighting be heavy and the casualties numerous, they are not intended to transport patients from the main dressing stations to the casualty clearing stations. This is the work of the medical transport units, called motor ambulance convoys, one of which is allotted to every army corps (Fig. 24). It also carries to the ambulance trains the evacuable patients of any advanced hospitals which do not lie immediately alongside a railway line. They are also employed, should pressure on the work of the ambulance trains be severe, in evacuating cases from the casualty clearing stations to the base hospitals by road, and sometimes to transport individual patients whose early arrival at a base is thought advisable, and who can be got there more promptly by road than if detained for the arrival of a hospital train.

Each convoy consists of fifty vehicles, usually divided into two large

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and one small section. The latter is commonly employed solely for train embarkation, and is then attached to one of the group of casualty clearing stations, and works under the orders of its commanding officer. The other two sections are each under the control of a motor convoy medical officer, who is personally responsible for the safe delivery of all patients loaded on the ambulance cars in his charge. Whenever possible he accompanies his section personally, not only because his attention may be required by a patient, but also in order to regulate the travelling pace. Within limits it is desirable that convoys should get over the ground quickly, and when roads are crowded by ammunition and general supply lorries, all anxious to complete their duties without loss of time, the presence of an officer with the ambulance convoy section ensures it a freer passage than it might

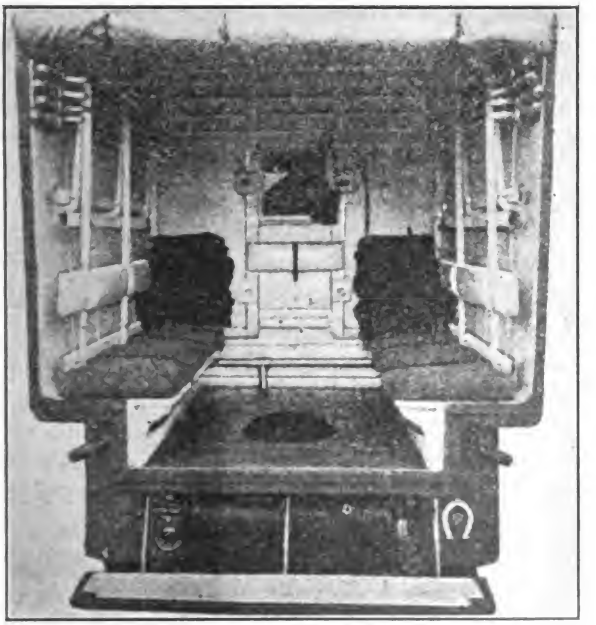

FIG. 24.—Interior of ambulance car heated by hot-air pipe from exhaust.

otherwise obtain. On the other hand, there may be certain patients for whom a slow travelling pace is desirable throughout, unless the surface of the roads prove excellent—a matter about which there is always uncertainty.

Each motor ambulance can carry six or eight patients sitting up, or four lying down. To neutralize the tendency to shock exhibited by so many wounded men the vehicles are now generally heated automatically by the exhausts (Fig. 24), and are also provided with hot-water bottles.

The motor ambulance convoys are an outcome of the circumstances of the war in France, and an example of the ingenuity of the Royal Army Medical Corps in promptly adapting its arrangements to the needs from time to time arising. Before the war the Royal Army Medical Corps, in common with the medical services of the armies of all other countries, had

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to depend for the transport of casualties between advanced formations such as field ambulances, and rearward units such as railhead hospitals, on the use of supply wagons going back empty to the rear. It was the only arrangement feasible at the time, and though admittedly far from ideal, was suitable enough for the small wars in more or less uncivilized countries to which Great Britain had been accustomed, and not involving any very large number of casualties.

CASUALTY CLEARING STATIONS

Evacuation Hospitals

The railhead hospital of casualty clearing station may theoretically be described in several ways.

1. As the administrative junction between the lower limit of the collecting zone or front with the upper limit of the evacuating zone or lines of communications.

2. As the focal point to which converge all roads leading from the front, and from which diverge all roads leading to the base.

3. As the spot where road transport ends and railway or analogous transport begins.

4. As the place where all casualties collected from main dressing stations are deposited until the moment comes for their transport through the evacuating zone to the base or distributing zone.

In practice the casualty clearing stations justify all four definitions more or less precisely, but the fact is rather obscured by their multiplicity and the great length of the front. It will be found, however, that whatever may be the position of a given casualty clearing station there are always roads that lead to it from the front, and that, however far beyond the general level of the evacuating zone it may seem to lie, it preserves its theoretical relation thereto, because a tongue or spur has been thrust up to meet it.

SELECTION OF SITE

Two of the essentials in the selection of a site for a casualty clearing station are ready access from the front for motor convoys and free communication with the base by ambulance trains. A third is plenty of room for the necessary tents or huts, a free water supply, and safety from any but extreme range artillery fire. To find a suitable site is often difficult. Adequate room and protection from artillery fire are generally easy to secure, and water can be piped from a considerable distance, but to find a place which, besides being suitable in other respects, is readily accessible by road from the main dressing stations concerned, and lends itself to evacuation to the base by train, is much more difficult. It is a problem, in fact, which can often be solved only by running a special branch railway up to the proposed site, or by choosing a site which is on an existing railway but at a considerable distance from the main dressing stations that have to be cleared.

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The first plan involves heavy expenditure of time and labor, and is usually adopted only when later on the site may be useful for some other purpose, or when the branch line can be made to serve more than one end.

The second solution is therefore the commoner, but it is to be remembered that accessibility and shortness of distance as the crow flies are not interchangeable terms. The old proverb, "The longest way round is the shortest way home," has a particular application to the transport of wounded men. Once a man is in a well-sprung pneumatic-tired ambulance car the exact distance that he travels is of less importance than the character of the roads over which he is borne. Hence, independently of all other considerations, a site which communicates with the front by good roads is always to be preferred, even if the distance to be traversed be treble, to one which can be reached only by lanes and cart-tracks.

This is one reason why the casualty clearing stations as a whole are distributed irregularly in regard to their distance from the main dressing stations they serve. The same reason also helps to account for the differences in the habitations of casualty clearing stations. Some are in permanent buildings in towns or villages, some in huts far away from all other buildings; others in huts and tent-marquees, other in tent-marquees alone. The completely tented casualty clearing stations are usually found to be in the new parts of the line. As they settle down they acquire huts for operating theatres and administrative purposes, and if, later on, when the line moves forward, the sites that they occupy are likely to prove suitable for stationary hospitals, all the tents are replaced by huts.

THE FUNCTIONS OF A CASUALTY CLEARING STATION

A casualty clearing station is in principle a mobile unit, since it must always keep within reasonable distance of the main dressing stations; and therefore be prepared to move when these are moved, in conformity with any change in the tactical situation of the troops they serve. Primarily it is an evacuating unit, and only intended to act as a hospital so long as it is forced by circumstances to retain its patients, and it was probably in order to keep its status well in the foreground that not long after the war began the title "casualty clearing station" was substituted for the original term "clearing hospital." For a corresponding reason every casualty clearing station is provided with three lorries of sufficient size to transport at a moment's notice all the equipment that strictly speaking it is entitled to possess.

But however thoroughly casualty clearing stations may justify the suggestion of their title, they always go a good deal beyond it; for their functions and personnel have been adapted to existing circumstances by the D.G.M.S. in France. Hence they are no longer mere stations but real hospitals, despite the fact that some are only about six miles from the fighting line, and few lie further off than double that distance. The patients are nursed by trained women nurses; ordinary hospital beds are provided

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for the more serious cases; the operating theatres have usually four operating tables, are equipped with electric light, and the appliances familiar in the hospitals of large towns; and while some have X-ray annexes of their own, all have at their command the services of travelling X-ray outfits, and clinical laboratory work is done for them by the mobile laboratories which are commonly to be found in their neighborhood.

When a casualty clearing station has been established for some little time, the chief differences between it and a base hospital are attributable to the diversity of duties that the casualty clearing station has to fulfil. In addition to acting as a true hospital for a short or long period, it must always be ready to operate on a very large number of patients, and to evacuate forthwith those that can safely be moved, and must also be able rapidly to prepare for immediate evacuation a very much larger number of slight cases. It must also be ready suddenly to receive and accommodate in one fashion or another an almost unlimited number of sick and wounded. Consequently, in addition to whatever accommodation in the way of actual beds it may possess, it must provide also:

1. Tents in which men lying on stretchers can be kept under cover, and receive what they require in the way of food, warmth, and surgical attention.

2. Accommodation for classifying the cases that arrive according to whether they must undergo operations under an anesthetic, or merely require some such attention as the redressing of a wound or the replacing of a splint.

3. Accommodation for men who have received all the attentions they need, and are merely waiting to be loaded on the train.

4. Accommodation for the performance of minor surgery.

THE WORKING OF A CASUALTY CLEARING STATION

Evacuation Hospital

There are considerable differences in the way different casualty clearing stations meet these needs, but in regard to definite operations the general practice is to provide sufficient accommodation and personnel for the performance of at least four operations simultaneously and continuously for an unlimited number of hours or days. Even when a battle is in progress, of the wounded men who arrive at the casualty clearing station at least 10 per cent. must visit the operating theatre before they can be sent to the base hospitals.

In regard to other matters the general procedure is usually as follows: As soon as a convoy arrives the patients are all off-loaded promptly so that the ambulance shall not be detained. They are carried into a distributing room, where, while a clerk takes down particulars of his army status, etc., a medical officer decides to what class of case each patient belongs, being guided in this matter partly by his condition, partly by what is stated on his field medical card.

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Thus, for instance, A, who has an abdominal wound, is sent straight to the operation-theatre preparation room. So, too, is B, who has a wound of the head and is insensible. C, who has a wound of the thigh, is sent to the stretcher case dressing-room; but D, who has an apparently corresponding wound, is for some reason in a state of profound collapse, and is therefore sent to the observation ward. E has a perforating wound of the upper thorax, and is sent to the chest ward; while F, who has a flesh wound of the shoulder, is sent to the walking case dressing-room.

When A arrives in the preparation room all his clothes are removed, and he is got ready for a laparotomy, which takes place as soon as a table in the theatre is free. B, in addition to other preparations, has his head shaved, and is sent to the theatre as soon as a surgeon and anesthetist are ready for him. It may be decided that no craniotomy should be performed, at all events until the patient has reached a base hospital, but the case must be thoroughly examined before this conclusion is reached.

C's stretcher is placed on trestles and his wound carefully examined to see whether any operation is required; if so, he too is sent to the operation-theatre preparation room; otherwise his wound is redressed and an extension or other splint suitable for train travelling is applied. D, on his arrival in the observation ward, is put to bed and submitted to various antishock measures until his condition is sufficiently good for an elaborate treatment of his wound. E, on his arrival in the chest ward, is examined by a medical officer who specializes in internal medicine.

When F enters the walking-case room his bandages are taken off and the required treatment applied, unless his general condition and his field medical card clearly indicate that no further interference with the wound is likely to be desirable until he reaches a base hospital. From the dressing tent for walking cases F goes to the evacuation tent for walking cases, where he is given food and cigarettes and waits for the ambulance train; a train is usually available every day, and even oftener in times of activity, but, if there is any delay, F is given a stretcher bed and his wound is redressed in due course.

Meantime, into another evacuation tent men who belong to the various classes, A, B, C, D, E, and who have come down with the same or a previous convoy, are being brought on stretchers from the wards or other places where they have been prepared for evacuation. The standing regulation is to send on all cases to the base as soon as suitable transport is available, but any case at all likely to suffer by transport is detained as a matter of course; chest cases are never sent down until all danger of hemorrhage is presumed to have ceased, and abdominal cases are detained until they have so far recovered that they can be sent straight through to Great Britain without further treatment at the overseas base.

In any case the number of men detained is usually quite sufficient to afford the personnel plenty of ordinary hospital work between the arrival of convoys, and in order to secure time for its due performance, even when fighting is heavy in the part of the line served by the casualty clearing

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station and casualties are numerous, every casualty clearing station has a partner located at the same rail-head, and the two are alternately "open" and "closed" for the reception of patients. When times are quiet the commonest plan is for the casualty clearing stations concerned to open and close on alternate days. During active fighting a casualty clearing station usually declares itself "closed" when it has a given number of unevacuated patients on its hands; its partner then takes the next convoys. Should it happen that the partners are both "closed," the D.M.S. of the army concerned sends later convoys to the casualty clearing stations of some other area under his command.

SPECIALIST SURGEONS

As a convoy does not represent a specific number of patients, and the number of convoys dispatched from any main dressing station in any twenty-four hours depends entirely upon the state of the fighting, the amount of work thrown upon a casualty clearing station varies greatly from time to time. Sometimes it resembles that of an ordinary hospital in a manufacturing town where accidents are frequent; sometimes that of a main dressing station of so elaborate a type as to be able to perform both aseptic and septic operations, and so large as to be able to deal with 1,000 or more patients a day. Its permanent staff consists of seven medical officers, but when the fighting is heavy it is reinforced by medical officers drawn from casualty clearing stations, field ambulances, or other medical units in other parts of the line. On its permanent staff are always at least two surgeons experienced in all classes of operative work, including abdominal surgery, and the reinforcements sent when times are active include other surgeons of the same type. The net result, therefore, is that by arranging in groups the total number of surgeons and anesthetists available, the necessary operations can be performed until the stress is over.

DISTRIBUTION OF PATIENTS

When the convoys are not large and not arriving in rapid succession, the work of distribution is done by the orderly medical officer on duty; at other times it is usual to select a surgeon of wide experience for the work, since the duty of the "spotting officer" then becomes a task of great responsibility. He must be able, for instance, to gauge rapidly the general condition of a patient and the probable degree of seriousness of his wound. In addition to bearing in mind continually how long it is likely to be before an ambulance train arrives to clear the hospital, he must keep a constant eye on the operation list. Should the latter be comparatively short or the stream of patients be falling off, his task becomes relatively easy, since he can mark for the preparation room any cases which seem at all serious. In the contrary case, he must decide whether the individual and general interests would best be consulted by sending the case down to the base forthwith, should an ambulance train be waiting or expected shortly to arrive.

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or by keeping him, even though it is not likely to be possible to perform the operation for many hours.

CONSULTING SURGEONS

The clinical work of the casualty clearing stations in each army is under the supervision of an officer who in peace times is a well-known consulting surgeon, and corresponding supervision is exercised in respect of medical conditions by a physician of analogous experience.

Before being evacuated from a casualty clearing station a note is added to the field medical card of every patient as to the treatment he has received, and if an operation has been performed, or he has been detained as an ordinary hospital patient, clinical notes concerning his case for the information of the medical officers at the base are sent on in an envelope attached to a button of his bed jacket.

Many casualty clearing stations also do a certain amount of work in attending to local sick—that is to say, to cases among labor parties and other troops in their neighborhood which are not in charge of a medical officer or within the area of the work of a field ambulance. It is also the rule for a casualty clearing station to detail a medical officer to afford medical attention to members of the civil population if a request to this effect is made by the local civil authority.

THE THEATRE TRAILER

Though a casualty clearing station is a mobile unit, the transfer of so large an institution from one site to another takes a considerable time. In an advance it may be desirable to push an operating section forward at once. To meet this need the "theatre trailer" has been devised. It consists of a large pitch-pine framework, which can be clamped on to a trailer drawn by one of the trucks of the casualty clearing station. The truck or lorry is loaded with stretchers, blankets, cooking and feeding requisites for a hundred serious surgical cases for two days, and carries also a hospital marquee and operating tent. The original idea for the trailer, as suggested by Colonel Cuthbert Wallace, was to fit it with shelves and pigeonholes, as on a ship. After further study, however, it was seen that it would be better to make the cupboards and other fittings movable, providing for the careful packing of their contents so that they would not suffer on the road. Each cupboard runs on four wheels, and is fitted to hold and carry without damage dressings, instruments, bowls, and enamel ware, as well as the Bowlby outfit and the parts in use in almost every casualty clearing station theatre. There are two cupboards for sterilized dressings, overalls and towels, sufficient for one day's operating, with two surgeons and four tables, dealing with 150 major operations. In addition, six complete sterilizing drums are carried, and in all sufficient dressings for 500 operations. Lotions, made up in quart bottles, are packed in a specially designed case

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fitted in one of the shelves. Boiled water and saline are taken in sterilized petrol tins. The instruments are packed in webbing straps stitched together and attached to the shelves. Three anaesthetic tables and folding stools are packed into two cases, which, when unpacked, can be used as surgeons' washing-up benches. The bottom shelf of each anesthetic table contains nine compartments, each of which holds a two-pound bottle of chloroform or ether. Two other shelves contain the anesthetic apparatus, masks, gauze, etc. Other cupboards contain primus stoves and their fuel, cleaning materials, a rack for splints, and a stand for the lotion copper cauldrons. The shelves fit one above the other, and can be built up in any order that may be desired to form dressers or small cupboards. The contents of one side lifted out of the trailer are shown in the illustration

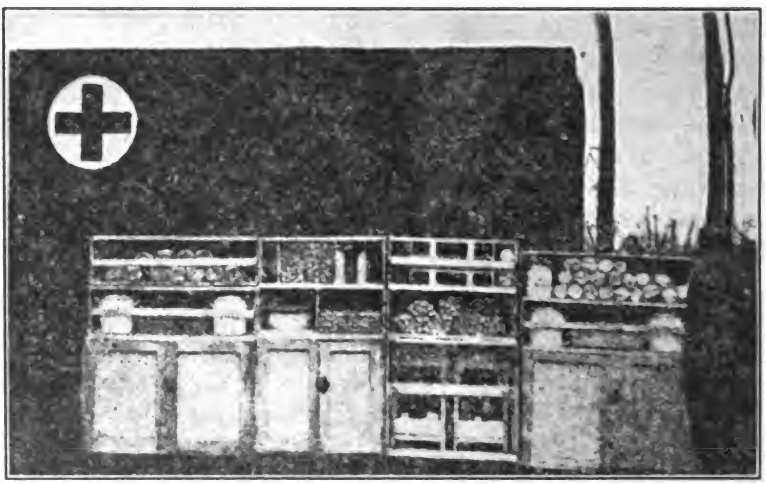

FIG 25.—Trailer with one half of its equipment unloaded. The cupboard most to the spectator's left is for dressings, the next for instruments, the next contains two anesthetic tables, and the cupboard most to the right has three compartments for splints—long splints, thigh, short splints, arm, and leg splints, respectively. The shelves above the cupboards show the method of packing dressings, etc.

(Fig. 25). With the trailer and trolley are four R.A.M.C. orderlies, and there are two Army Service drivers. These six men can pack the loaded furniture into the trailer in ten minutes. The main advantages of this trailer, the details of which have been worked out by Captain E. M. Cowell, R.A.M.C.,[1] and Lieutenant-Colonel G. H. Goddard, R.A.M.C., are that it ensures the careful transport of the delicate equipment of an operating theatre and provides operating room furniture ready for immediate use in all circumstances.

AMBULANCE TRAINS AND HOSPITAL BARGES

A patient may be sent down through the evacuating zone to the base either by ambulance train, by hospital barge, or by motor convoy; in the great majority of cases the first is the method employed.

[1] A full account of the Wallace-Cowell trailer, with details of construction and stores, will be found in the *Journal of Royal Army Medical Corps* for June, 1917.

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AMBULANCE TRAINS

Several types have been used since the war began. In the early days the predominant type was made up mainly of freight or baggage cars fitted with racks to support stretchers, and supplemented by straw-strewn vans for the more lightly wounded. These trains were effective so far as actual transport was concerned, and were easy to load and unload, since the doors were wide; but the carriages could not be lighted easily or kept warm, they afforded no conveniences for administrative work, and it was very difficult for the medical officers to attend to their patients once the train had started. Moreover, unless the vans were drawn from passenger trains, and this was comparatively rare, they were mounted on four wheels only, had very ineffective springs, and practically no brakes. They were gradually displaced by trains built up of ordinary passenger coaches[1] supplemented by a saloon or restaurant car for administrative purposes. The compartments were so arranged that they could each contain four stretcher cases lying at right angles to the line of travel. Most of the coaches thus used had six wheels, and were much better sprung and braked than goods vans. They were also much better lighted, and, as a rule, each vehicle had a firebox attached exteriorly, and thus had independent heating. On the other hand, loading and unloading was not easy, since the doors were narrow, and only rarely was it possible to arrange for intercommunication between all the carriages, so that some of them could be visited only by walking along the foot-board or by stopping the train.

A few trains of this type are still in use, but the majority belong to a third type, which is built up partly of corridor car "coaches" for patients able to sit up, partly of specially constructed "ward" carriages (Fig. 26), intercommunicating cars with tiers of berths down each side and a passage way between them. These berths are open at the ends, and have both wire and ordinary mattresses and blankets and sheets, and the patients are habitually put to bed in them, unless for some reason, such as the existence of an injury to the spinal column, it is desired to avoid moving a patient off his stretcher. In such cases the stretcher is laid on the top of the bed. These tiers of beds are arranged parallel to the line of travel, and as there are six sets of tiers on either side and each consists of three berths, the normal accommodation of a travelling ward is thirty-six patients, while if occasion requires, it can be increased to forty by laying stretchers in the passage way between the tiers.

The usual plan is to place the carriages in the following order, working from the engine backward: A carriage used as an isolation ward; a coach with its compartments arranged as sleeping quarters for the medical and nursing staff; a kitchen coach; four or five ward carriages; an administrative carriage, providing an office, a room for the performance of operations (Fig. 27), and a dispensary; four or five coaches for sitting-up patients; a

[1] This applies to cars divided transversely into compartments after the European method.

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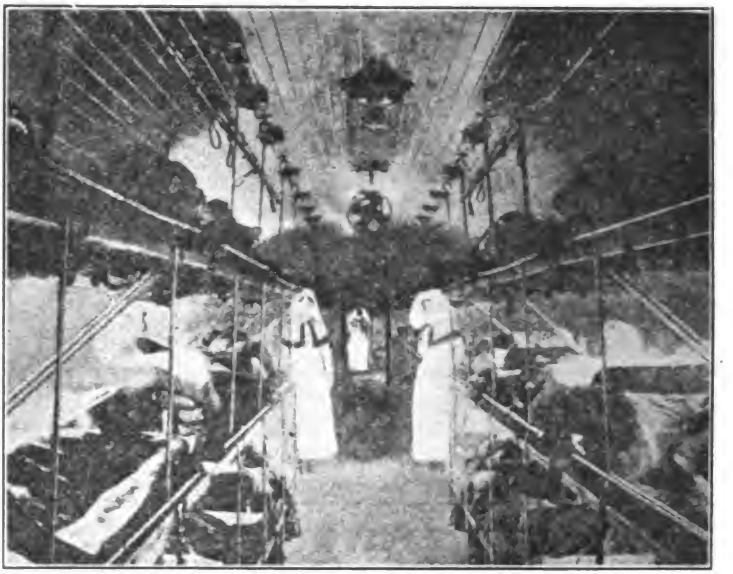

FIG. 26.—Interior of an English hospital train; the majority of lying cases are evacuated by ambulance train.

FIG. 27.—The operating theatre of an English ambulance train.

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carriage for general cooking purposes; a coach to serve as sleeping quarters for the subordinate personnel; a van for stores; and a guard's van. About 400 patients is an average load for such a train.

The "ward" carriages have wide external as well as internal doors, so that they are easy to load and unload, and the train is electrically lighted and steam heated from end to end. The wide doors of communication between the carriages afford a vista of half a dozen carriages in succession, and the actual passage way extends from one end of the train to the other. All the ward carriages, moreover, are mounted on well-sprung eight-wheeled chassis, and a Westinghouse compressed air automatic brake operates from end to end of the train. The net result is that they are easy to work and run smoothly even over the much-used permanent ways of Northern France.

All the advantages of these trains are attained likewise in a fourth type, which is the latest to come into use. In it the accommodation for patients consists entirely of ward carriages, wherein as much provision for sitting-up patients as may be required is made by turning up the middle berths of the tiers, thus leaving the upper berth for a lying-down case, while the lower one forms a sofa for three or four sitting-up patients. In the third type of train the sitting accommodation in the coaches often proves to be in excess of the requirements, so that the fourth type represents economy in engine power and rolling-stock, since, whatever the proportion of lying-down cases to sitting-up cases, the whole of the accommodation can be utilized.

Ambulance trains, so long as they are loaded are managed very much as if they were ordinary hospitals, but there is not usually very much dressing to do, unless in a considerable proportion of the cases irrigation treatment is being applied. There are always, however, patients who require attention, and for the first hour or so, at any rate, after the train has been loaded the whole of the staff is kept busy. Once they have settled down the majority of patients sleep peacefully to the end of their journey, even those who are traveling in sitting-up coaches. They have left the battlefield behind them; they have had their wounds dressed, and all tension is at an end. This restfulness of an ambulance train, despite many physical reasons to the contrary, was noted long before the prevailing type of train came into use, and is one of the more curious psychological features of the war.

For an ambulance train of the second type the allowance of medical officers is usually three, but for the third and fourth types only two are generally required; in each case three or four sisters are carried in addition to nursing and general-duty orderlies, cooks, etc. Unless a journey is unusually long, the majority of the staff remains on duty during the time the train is loaded. As soon as the patients have been unloaded the whole train has to be cleaned, bed-linen changed, dirty linen dispatched to the wash, and fresh supplies of stores obtained, so that rest for an ambulance train staff does not come until the up-country journey has commenced.

The movements of the trains as a whole are regulated by a medical officer of the staff of the D.M.S. Lines of Communication. If a full load is not waiting at any single rail-head, several are visited in succession. Once

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loaded, the train travels at a rate of about twelve miles an hour to its destination at the base, which may be anything from fifty to a hundred miles away. Information as to the hour of its probable arrival is telegraphed to an officer at its destination, who meets the train with a sufficient number of stretcher-bearers and motor ambulance cars to distribute the patients promptly among the various hospitals at this base.

HOSPITAL BARGES

Evacuation by hospital barges is necessarily restricted to parts of the front traversed by navigable canals, and also by the fact that comparatively few casualty clearing stations lie sufficiently near canals for patients to be embarked without an intermediate journey in an ambulance car. This

FIG. 28.—Interior of a barge full of wounded.

means of evacuation is slow, but is of use in dealing with patients for whom it is desired to secure absolute freedom from shaking. Barges, however, are not used solely for evacuating purposes; in certain parts of the line they can be taken close up to main dressing stations and advanced operating stations, and can then be used either to provide additional accommodation or practically as if they were travelling casualty clearing stations, chest cases and abdominal cases being placed straight on board after operation and taken down to a port, where they are evacuated to a home base by being loaded on a hospital ship.

The barges used are those familiar on Flemish canals. When one end of the interior has been partitioned off into cabins for the staff, and the other into a kitchen, scullery, and quarters for the subordinate personnel, there remains ample room in the middle for thirty ordinary hospital beds arranged

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fifteen on each side with a passage between them. There is a space amidships into which patients are lowered from the deck above by means of a hand lift. This space can be used for the performance of operations if necessary. Except that its ceiling is low (about 10 ft.) and its diameter comparatively narrow (about 16 ft.), a barge ward looks very much like a hospital ward (Fig. 28).

All the barges are provided with a dynamo and gas engine; they can be lighted either by electricity or by removing one or more sections of the deck which forms the ceiling of the ward. They are drawn by a tug in charge of men accustomed to canal work. They are divided into flotillas of four, but more often than not they travel singly or in couples. Every barge carries two trained women nurses in addition to nursing orderlies, general orderlies, and cooks. Each barge also carries a medical officer, unless two barges or more are travelling together, and then one is sufficient for all of them. The average duration of a barge journey is from twenty-four to forty-eight hours. The travel only by daylight, and at the rate of about three miles an hour.

STATIONARY HOSPITALS

At places along the railways traversing the evacuating zone there are medical units known as stationary hospitals. These in theory are 200-bed hospitals of comparatively simple equipment as compared with that of a general hospital. Their bedsteads, for instance, are folding iron "barrack bedsteads," and they are not supposed to have clinical laboratories or X-ray annexes. In France, however, nearly all stationary hospitals are capable of accommodating several times their regulation number of patients and many in point of equipment and extent of accommodation do not differ from the large general hospitals in the distributing zone, unless they are used to fulfil some special aim.

Such of these units as are in the evacuating zone do their work in direct association with main dressing stations, and since the dispatch of a patient to them does not necessarily entail his formal evacuation, they are almost to be regarded as annexes thereto and therefore as front-line units. The rest are used for the reception and treatment of cases of sickness and injury among troops on the lines of communication, and for cases which the medical officers in charge of ambulance trains may think it desirable to off-load at the earliest possible moment. Strictly speaking, a stationary hospital is not entitled to more than seven medical officers, but it is allotted a larger number if it accommodates more than its regulation number of patients, and is doing work which for its due performance requires an augmentation of the staff.

CONTROL

It is from general headquarters that the Director-General of Medical Services usually controls the whole of the medical work of the front through the Directors of Medical Service of the different armies, as also that of

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the evacuating zone and the distributing zone through the Director of Medical Service Lines of Communication.

The operations thus controlled include not only the disposition and maintenance of hospitals and other medical units, together with all the arrangements for the evacuation of patients from the front to the bases and from the bases to the United Kingdom, but also certain other important branches of work. These are the distribution of medical reinforcements, the coördination of action throughout the whole British force in regard to sanitation and the prevention of epidemic disease, and the work of weeding out from the armies men who, though still useful soldiers, are not capable of doing front-line work, many of whom must eventually be sent home to be discharged from the army.

At the same place are also held the periodic meetings of a council formed by the Director-General of Medical Services to assist him in the settlement of questions from time to time arising. It consists of eight members and is so constituted that the temporary and permanent elements of the medical service of the army, general and bacteriological hygiene, medical and surgical work at the front, the same work at the bases, and administration throughout the whole area, are all represented in equal proportions.

There is a second council of the same general kind, which includes the whole of the civilian consultant specialists holding temporary commissions in the army, as well as the principal permanent officers on the staff of the Director-General of Medical Services. But this meets less often owing to the difficulty of withdrawing so many officers from their ordinary work simultaneously.

THE DISTRIBUTING ZONE

The hospitals to which the patients are sent on their arrival in the distributing zone are known as general and stationary hospitals. The former are in theory much larger and more comprehensively equipped than the latter. In practice, however, there is in France often no difference even in point of size, and invariably both afford the same facilities for the best forms of medical and surgical work. That is to say, their ward equipment is of the same kind as in large civil hospitals in times of peace, they have all large and elaborate operating theaters and annexes, and bacteriological laboratories and X-ray annexes.

ORGANIZATION OF GENERAL AND STATIONARY HOSPITALS

In point of size every stationary hospital can now accommodate at least 500 patients instead of the regulation 200, and every general hospital at least 1040 instead of 520. The larger figures represent the number of beds kept at all times ready for the reception of patients. In time of pressure the accommodation can be increased by some 50 per cent. The clinical work is divided into a medical and a surgical division, each in charge of a specialist assisted by ward medical officers. To the surgical division there

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are also attached specialists in operative surgery who vary in number according to the accommodation of the hospital.

The nursing is done by trained women, those appointed to each ward working under the supervision of a ward sister, who is subject in her turn to the hospital matron. There are also a certain number of orderlies trained in nursing duties, who assist and on occasion replace the women nurses, and of general duty orderlies who do all the rough work of the hospital. The male personnel is under the control of a noncommissioned officer commonly called a wardmaster, who is subject in his turn to the sergeant major of the hospital. Supplies of every kind are obtained by the quartermaster, who is responsible for their due preparation. He holds honorary rank as an officer in the Royal Army Medical Corps, and to attain this position he must not only possess tact and good manners, but must pass examinations in general education and technical and military subjects spread over so many years that most quartermasters are men who have entered the corps at a very early age.

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CHAPTER X

HOSPITAL TRAINS

The following chapter was written almost in its entirety by Major William L. Hart, M.C., when commanding Hospital Train No. 1.

The Manual for the Medical Department states that for the transportation of sick and wounded, hospital trains and trains for patients will be provided. Each of the former will carry 200 patients, and will consist of ten cars, of which eight will be for patients. The personnel to be provided is enumerated in Par. 614, M.M.D. Hospital Train No. 1, the only hospital train commissioned in our service in recent years, has a somewhat different personnel.

The train consists of ten Pullman cars which have undergone necessary alterations and received additional equipment. A description of the cars is as follows:

Car No. 1. Kitchen and Personnel Car.—It was originally designed for use in transporting troops, as per specifications of the War Department.

The kitchen, which is the front one-third of the car, is complete with refrigerator, range, sinks, lockers and lights, and has an overhead tank for hot water, of 60-gallon capacity.

In the rear of the kitchen is a 6-foot pantry with racks for dishes, drawers, tables, wash bowl and an overhead tank for cold water of 88-gallon capacity.

The remainder of the car is equipped with fourteen sleeping sections, with laboratories, toilet service, lockers, cabinets and water cooler.

The fourteen sections are used as a diner for the enlisted personnel, Army Nurse Corps and Pullman employees, and as a sleeping car for the porters and cooks. This car is placed at the forward end of the train in order to avoid traffic through the kitchen. There are two tanks under the car, of 140-gallon capacity each, operated by 25 pounds air pressure.

Car No. 2 is used for sleeping quarters of the enlisted personnel on duty on the train.

Cars 2 and 9 Are Pullman Tourist Practically Unchanged.—Under each car there is a tank of 140-gallon capacity, operated by 25 pounds air pressure. Car No. 9 is intended for ambulant cases and will accommodate thirty-two patients, allowing a berth for a patient.

Cars No. 3, 4, 6, and 7. Ward Cars.—These are Pullman tourist, which have been stripped of all lower berths. Two side doors opposite each other, 3 feet wide, have been cut in one end for the purpose of entraining and detraining litter cases. The end doors have been widened so as to

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admit the standard army stretcher. The upper berths have been left intact. The lower berths have been replaced by fourteen hospital beds, 6 feet 4 inches overall in length, 30 inches wide, with standard national springs, felt mattress and two hair pillows being provided for each. Medical Department linen and blankets are used on the beds, Pullman equipment being used in the berths. The legs of the beds are provided with flanges, so that they can be attached to the floor. Each of these cars provides for fourteen bed cases and fourteen ambulant cases (upper berths). The following additional installations for each of these cars have been made: Cabinet for medicines, lockers for linen, folding table and chair for attendant. All windows and doors have been screened. Under each car there is a tank, of 140-gallon capacity, operated by 25 pounds air pressure.

Car No. 5. Operating and Surgical Ward Car.—This car has been stripped of both upper and lower berths and the body of the car carried out to include the forward vestibule.

There is a partition cutting off the rear one-third of the car, which has a wide center door with opaque glass in the upper half.

The smallest section of this car, which is about 25 feet in length, has two side doors, 4 feet wide, cut opposite each other in the center of the section.

This section is the operating room. It is fitted out with operating table, two wash basins and a sink (with foot control), two overhead tanks of 80-gallon capacity each, which supply water for the basins and sink, cabinet for dressings, cabinet for instruments and medicines (with sliding glass doors), cabinet for linen, stools, composition floor, four extra lights, and the whole painted light gray.

The remaining two-thirds of this car has twelve hospital beds similar to those in the ward cars and is used as the surgical ward for serious cases.

Car No. 8. Storage, Office and Ward Car.—This car is the same as car No. 5, except that the section used as an operating room is here used as an office and storage of surplus supplies. It is supplied with shelves and lockers. Both of these cars are supplied with one tank, under car, of 140-gallon capacity, operated by 25 pounds air pressure.

Car No. 10. Officer's Car.—This car is a standard Pullman sleeper, with fourteen sections and one drawing room. The forward two sections are partitioned off from the rest of the car. The drawing room is for the use of the commanding officer; the forward two sections for his assistants and the remaining part for the female nurses. There is a shower bath in each end of the train, the one in the rear portion being supplied from an overhead tank of 115-gallon capacity, the other being supplied from the 140-gallon tank under the car by 25 pounds air pressure.

All cars are heated through a hot-water system operated by the engine. Cars 1, 2, 3, 4 ,6, 7 and 9, in addition, have Pullman steel heaters.

All cars are equipped for electric lights, having axle generators and one set of 350-ampere-hour batteries, 16 cells per set, 30-volt system. Cars 1, 2, 3, 4, 6, 7 and 9, in addition to electric lights, are equipped for lighting by Pintsch gas which can be used in case of failure of electric lights.

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Water coolers in each car have separate compartments for ice and water and are stencilled to so indicate.

Ventilation is provided for on each car as follows: Screens at all end doors, windows, and deck sash; on cars No. 5 and 8 the screen wire at window openings is permanently placed in the outside window sash. The other cars have full size sliding screens between the inner and outer window sash, which can be kept raised or lowered as desired. Exhaust ventilators (at

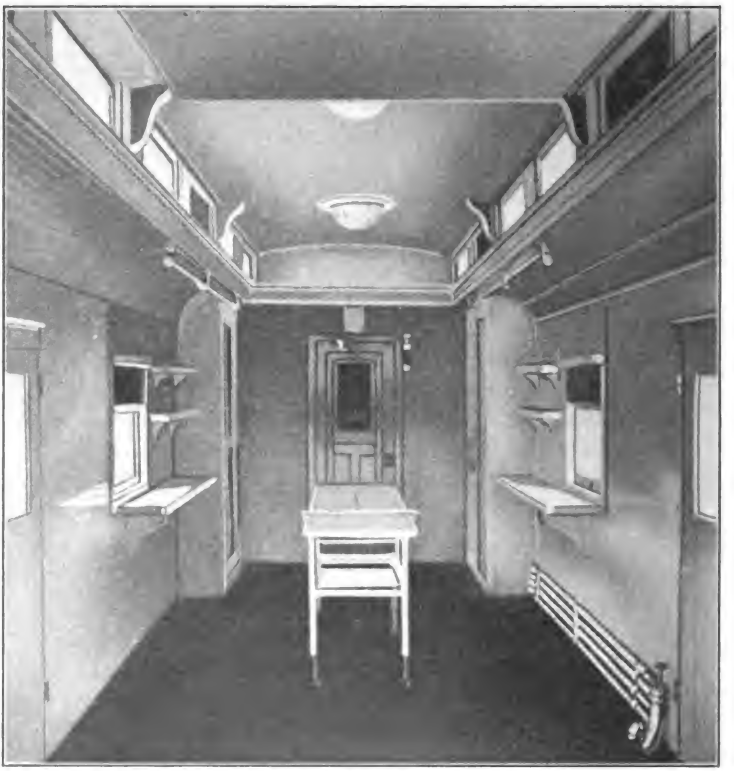

FIG. 29.—Operating room in Hospital Train 1. (*Chamberlain.*)

side deck) which operate only while train is in motion. Electric exhaust fans (at side deck). Electric blow fans.

Metal window deflectors are provided for each car and held when in position by knobs at each window opening, and are used to prevent dirt and cinders drifting in through the screens.

The ice-carrying capacity, not including water coolers, is as follows:

Car No. 1: Refrigerator in kitchen, ice compartment 13 by 32 by 78 inches; one box under car, two compartments 20 by 26 by 31 inches and 20 by 26 by 34 inches; one box under car, three compartments 22 by 29 by 32 inches, 22 by 29 by 33 inches, and 23 by 27 by 34 inches.

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Car No. 8: One box under car, ice compartment 19 by 25 by 58 inches.

The weight of the ice carried by the compartments, in the order named above, is as follows: 800; 300; 300; 200; 200; 200; 300—a total of 23,000 pounds.

Removable tables for use in sections are provided as follows: Car No. 1, 14; car 2, 15; car 9, 16; car 10, 4—a total of 49 tables.

FIG. 30.—Inside view of Car 5, Hospital Train 1. In the other ward cars the upper berths have been retained for less serious cases, while the beds are reserve for the more serious. (*Chamberlain.*)

A hook is provided under each car at each hopper tube from which a soil can can be hung when the train is not in motion.

Property:

Regulations provide that hospital trains will be equipped under special instructions from the Surgeon General of the Army, no definite equipment being provided.

The following was the equipment of Hospital Train No. 1.

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	Kitchen and personnel car	Convalescent ward car	Ward car	Ward car	Surgical ward car	Operating room	Ward car	Ward car	Ward car	Storage and office	Convalescent ward car	Officers' car	Total
	1	2	3	4	5	58	6	7	8	88	9	10	
Acetphenetidinum, 324-mgm. tablets, 500 in 12-oz. tin. (Tins)						2							2
Acidum boricum, 324-mgm. tablets, 700 in 12-oz. tin. (Tins)						2							2
Acidum salicylicum, 324-mgm. tablets, 400 in 12-oz. tin. (Tins)						1							1
Æther, ¼ lb. in tin. (Tins)						24							24
Alcohol, 3 pt. in tin. (Tins)						18							18
Amylis nitris, 5-drop spirits, 12 in box. (Boxes)						2							2
Apomorphine hydrochloride, 6-mgm. hypodermic tablets, 20 in tube. (Tubes)						6							6
Argenti nitras, crystals, 1 oz. in bottle. (Bottles)						1							1
Argenti nitras fusus, 1 oz. in bottle. (Bottles)						1							1
Aspirin, 324-mgm. tablets, 500 in bottle. (Bottles)						4							4
Capsicum, 32-mgm. tablets, 600 in 3-oz. tin. (Tins)						1							1
Chloralum hydratum, 324-mgm. tablets, 400 in bottle. (Bottles)						2							2
Chloroformum, ½ lb. in tin. (Tins)						144							144
Cocainæ hydrochloridum, 10-mgm. hypodermic tablets, 20 in tube. (Tubes)										20			20
Codeina, 32-mgm. tablets, 600 in 3-oz. tin. (Tins)						1							1
Collodium, 1 oz. in bottle. (Bottles)						6							6
Emplasterum belladonnæ, 2 yd. by 6 in. in tin. (Tins)						1							1
Foot powder (Par. 902), ¼-in. tin, with perforated cover. (Tins)						10							
Glycerinum, 3 pt. in tin. (Tins)						1							1
Heroini hydrochloridum, 5.5-mgm. tablets, 500 in 3-oz. tin. (Tins)										1			1
Hexamehthylenamina, 324-mgm. tablets, 600 in 12-oz. tin. (Tins)						1							1
Hydrargyri chloridum corrosive tablets (antiseptic) (Par. 902), 250 in bottles. (Bottles)						10							10
Hydrargyri chloridum mite, 32-mgm. tablets, 1.000 in bottle. (Bottles)						8							8
Hydrargyri iodidum flavum, 10-mgm. tablets, 750 in 3-oz. tin. (Tins)						2							2
Ichthyolum, 3 oz. in wide-mouth bottle. (Bottles)						6							6
Iodum-potassii iodidum in tube. (Tubes)						200							200
Linimentum rubefacients, tablets (Par. 902), 200 in 12-oz tin. (Tins)						2							2
Magnesii sulphas, 3 lb. in tins. (Tins)						5							5
Mistura glycyrrhizæ composite tablets (Par. 902), 3.600 in 12-oz. tins. (Tins)						1							1
Morphinæ sulphas, 8-mgm. hypodermic tablets, 20 in tube. (Tubes)										48			48

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	Kitchen and personnel car	Convalescent ward car	Ward car	Ward car	Surgical ward car	Operating room	Ward car	Ward car	Ward car	Storage and office	Convalescent ward car	Officers' car	Total
	1	2	3	4	5	5S	6	7	8	8S	9	10	
Morphinæ sulphas, 8-mgm. tablets, 600 in 3-oz. tin. (Tins)										1			1
Normal saline solution, tablets (Par. 902), 150 in 12-oz. tin. (Tins)						2							2
Oleumricini, 3 pt. in tin. (Tins)						4							4
Petrolatum, in 3-lb. tin. (Tins)						2							2
Phenol, ½ lb. in bottles. (Bottles)						8							8
Oleum terebinthinæ rectificatum, 3 pt. in tin. (Tins)						2							2
Phenylis salicylas, 324-mgm. tablets, 500 in bottle. (Bottles)						1							1
Pilulæ aloini compositæ (Par. 902), 750 in 3-oz. tin. (Tins)						1							1
Pilulæ camphoræ et opii (Par. 902), 575 in 12-oz. tin. (Tins)						2							2
Pilulæ catharticæ compositæ, 1.200 in 12-oz. tin. (Tins)						4							4
Pilulæ ferri compositæ (Par. 902), 1.200 in 12-oz. tin. (Tins)						1							1
Plumbi acetas, 130-mgm. tablets, 600 in 3-oz. tin (Tins)						1							1
Potassii bromidum, 324-mgm. tablets, 500 in bottle. (Bottles)						2							2
Potassii chloras, 324-mgm. tablets, 1.200 in 12-oz. tin. (Tins)						1							1
Potassii permanganas, 324-mgm. tablets, 1.200 in 12-oz. tin. (Tins)						1							1
Protargol, 1 oz. in bottle. (Bottles)						8							8
Pulvis ipecacuanhæ et opii, 324 mgm. tablets, 700 in 12-oz. tin. (Tins)						2							2
Potassii iodidum, 324-mgm. tablets, 500 in bottle. (Bottles)						2							2
Quininæ hydrochlorosulphas, 32-mgm. hypodermic tablets, 20 in tube. (Tubes)						20							20
Quininæ sulphas, 200-mgm. tablets, 1.000 in 12-oz. tin. (Tins)						5							5
Sapo mollis, ½-lb. jar in case. (Jars)						6							6
Sodii bicarbonas, 324-mgm. tablets, 1.000 in 12-oz. tin. (Tins)						1							1
Sodii bicarbonas et mentha peperita tablets, 100 in 12-oz. tin. (Tins)						1							1
Sodii bicarbonas monohydratus, for surgical use, ½ lb. in 12-oz. tin. (Tins)						2							2
Sodii salicylas, 324-mgm. tablets, 600 in 12-oz. tin. (Tins)						2							2
Spiritus fruminti, 1 qt. in bottle. (Bottles)						12							12
Strychninæ sulphas, 1-mgm. hypodermic tablets, 20 in tube. (Tubes)										36			36
Spiritus ammoniæ aromaticus, ½ lb. in glass-stoppered bottle. (Bottles)						8							8
Sulphur lotum, ½ lb. in 12-oz. tin. (Tins)						1							6
Thymolis, 1 oz. in bottle. (Bottles)						2							2
Tinctura digitalis, ½ lb. in bottle. (Bottles)						1							1

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	Kitchen and personnel car	Convalescent ward car	Ward car	Ward car	Surgical ward car	Operating room	Ward car	Ward car	Ward car	Storage and office	Convalescent ward car	Officers' car	Total
	1	2	3	4	5	58	6	7	8	88	9	10	
Tinctura opii, ½ lb. in bottle. (Bottles)						4							4
Trochisci ammonii chloride, 350 in 12-oz. tin. (Tins)						4							4
Unguentum hydrargyri, ½ lb. in wide-mouth bottle. (Bottles)						1							1
Unguentum hydrargyri chloride mitis 30 per cent., ½ lb. in wide-mouth bottle. (Bottles)						1							1
Veronal, 324-mgm. tablets, 100 in 3-oz. tin. (Tins)						2							2
Zinci oxidum, powder, ½ lb. in 12-oz. tin. (Tins)						1							1
Zinci sulphas, 324-mgm. tablets, 250 in 3-oz tin. (Tins)						1							1
Alcohol, denatured, 5 gal. in bottle (Bottles)						10							10
Axes, with handles. (Number)										2			2
Bags, rubber, hot water and syringe. (Number)			1	1	1		1	1	1				6
Bandages, flannel, 3-in. roller (Dozens)						3							3
Bandages, gauze compressed, 3 sizes, 1 gross in box. (Boxes)						16							16
Bandages, rubber Martin. (Number)						4							4
Bandages, suspensory. (Number)						2							2
Basins, hand, enamelware. (Number)			3	3	5		3	3	3				20
Bedpans box of (Par 906). (Number)			2	2	1		2	1	1				9
Blankets, rubber. (Number)			6	6	6		6	6	6				36
Boxes, folding for tablets. (Gross)						10							10
Boxes, ointment, 3 in nest. (Nests)						48							48
Brushes, hand fiber. (Number)		1	1	1	1	17	1	1	1				24
Buckets, enamelware, 3 in nest. (Nests)	5											1	6
Buckets, g.i. (Number)	2		1	1	1		1	1	1	4			12
Calcium carbide, 10 lb. in tin. (Tins)										6			6
Cases, operating, small (Par. 922). (Number)						1							1
Chest, acetylene (Par. 927). (Number)										1			1
Chests, medical and surgical (Par. 932). (Number)						1							1
Chest, medical and surgical, supplementary (Par 933). (Number)						1							1
Chest, sterilizer (Par. 935) (Number)						1							1
Chest, tool, No. 2 (Par. 938) (Number)										1			1
Cotton, absorbent, in roll. (Pounds)					20								20
Cotton, absorbent, sterilized, in 1-oz. package. (Packages)						800							800
Cups, e.w. (Number)			28	28	12		28	28	12	24			160
Desk, field, No. 1 (Par. 940). (Number)										1			1
First-aid packets (Par. 944) (Number)						100							100
Food, boxes of (Par. 948). (Number)										4			4
Gauze, sublimated, 2 half-yard lengths in package. (Packages)						750							750
Gloves, rubber, sizes 8 and 9. (Pairs)						16							16
Graduate, glass, 100-c.c. (Number)						1							1
Graduate, glass, 250-c.c. (Number)						1							1

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	Kitchen and personnel car	Convalescent ward car	Ward car	Ward car	Surgical ward car	Operating room	Ward car	Ward car	Ward car	Storage and office	Convalescent ward car	Officers' car	Total
	1	2	3	4	5	5S	6	7	8	8S	9	10	
Inhalers, chloroform, Esmarch, with drop bottle. (Number)						2							2
Lanterns, without globes or wicks. (Number)	1	3								15		1	20
Lanterns, globes for, green. (Number)										10			10
Lanterns, globes for, white. (Number)										60			60
Lanterns, wicks for										48			48
Litters, canvas for. (Pieces)										6			6
Litters, tacks for, 75 in package. (Packages)										12			12
Litters, with slings. (Number)			3	3	5		3	3	3				20
Medicine droppers. (Number)						12							12
Medicine glasses. (Number)			2	3	2	2	2	2	2				15
Needles, surgical, assorted. (Dozens)						4							4
Pajamas, coats. (Number)			28	28	12		28	28	12	60			196
Pajamas, trousers. (Number)			28	28	12		28	28	12	64			200
Pins, common. (Papers)						20							20
Pins, safety, 3 sizes. (Dozens)						40							40
Plaster, adhesive, s.o., 5 yd. by 1 in. (Spools)						24							24
Plaster, adhesive, s.o., 5 yd. by 2½ in. spools. (Spools)						12							12
Pouches, H.C. (Complete)										18			18
Soap, hand. (Cakes)										100			100
Soap, ivory. (Cakes)										150			150
Splints, coaptation, 5 in set. (Sets)						12							12
Splints, wire gauze for, 1 yd. in roll. (Rolls)						25				25			50
Splints, wood veneer. (Number)										50			50
Stoves, alcohol. (Number)										1		1	2
Sutures, catgut, chromicized, sterilised, 18 in. each, 3 sizes in package. (Packages)						100							100
Sutures, catgut, plain, sterilised, 18 in. each, 3 sizes in package. (Packages)						100							100
Sutures, silk, braided sterilised, 18 in. each, 3 sizes in package. (Packages)						100							100
Sutures, silkworm gut, 100 in coil. (Coils)						10							10
Sutures, silver wire, yard lengths. (Yards)						4							4
Syringes, hypodermic (Par. 956). (Number)						4							4
Syringes, hypodermic, extra needles for. (Number)						24							24
Syringes, penis, glass, in case. (Number)						24							24
Tags, diagnosis. (Books)										50			50
Thermometers, clinical. (Number)			3	3	5		5	6	6	2			30
Tourniquets and bandages, rubber. (Number)						4							4
Towels, dish. (Number)			4	4	4		4	4	4	36			60
Towels, hand. (Number)			60	60	60		60	60	60	240			600
Tubing, drainage, unperforated, 1, 2, and 3 yd. (Number)						9							9
Typewriter. (Number)										1			1

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	Kitchen and personnel car	Convalescent ward car	Ward car	Ward car	Surgical ward car	Operating room	Ward car	Ward car	Ward car	Storage and office	Convalescent ward car	Officers' car	Total
	1	2	3	4	5	58	6	7	8	88	9	10	
Chest mess (Par. 890), A and B, M.M.D., 1911. (Number)										1			1
Heater, oil Barber, No. 2. (Number)										1			1
Typewriter, folding stand for. (Number)										1			1
Typewriter, corona 3/84843, with regular carrying case. (Number)										1			1
Unit boxes. (Number)										5			5
Basket, waste paper. (Number)										1			1
Envelopes, official, large. (Number)										300			300
Envelopes, official, letter. (Number)										100			100
File, Shannon. (Number)										1			1
Pad, for stamp. (Number)										1			1
Paper, blotting, pieces. (Number)										12			12
Paper fasteners. (Boxes)										1			1
Paper, manifolding letter, 500 sheets in package. (Packages)										2			2
Paper, typewriting, letter, 500 sheets in package. (Packages)										2			2
Paper, writing note, 100 sheets in pad. (Pads)										3			3
Paste, library. (Jars)										1			1
Pens, asst. steel. (Number)										30			30
Paper, writing legal cap. (Gross)										1			1
Stamp, rubber, Hospital Train No. 1, Medical Department U. S. Army. (Number)										1			1
Stamp, dating. (Number)										1			1
Bags, rubber ice, for heads. (Number)			1	1	1		1	1	1				6
Bandages, gauze roller, asst., 6 doz. in box. (Boxes)										12			12
Basket, laundry. (Number)										2			2
Bath, robes. (Number)			14	14	12		14	13	12				79
Bedstead, iron white enamel. (Number)			14	14	12		14	14	12				80
Blankets, white. (Number)			38	37	24	1	38	38	24				200
Boilers, coffee, 11-qt. (Number)	4												4
Bowls, soup, delf. (Number)					12				12				24
Brooms, hair, long handles. (Number)		1	1	1	1		1	1	1				7
Brushes, hair counter. (Number)		1	1	1	1		1	1	1				7
Cups, spit, paper. (Number)													
Cups, spit, paper, metal frames for. (Number)			2	2	2		2	2	2				12
Cushions, surgical, Kelly. (Number)						1							1
Dippers, long handles. (Number)	1												1
Forks, table S.P. (Number)			28	28	12		28	28	12				136
Freezer, ice cream, 3-gal. (Number)										2			2
Gowns, operating. (Number)						6							6
Knives, table S.P. (Number)			28	28	12		28	28	12				136
Lamps, stand, chimneys for. (Number)										6			6
Lamps, stand, complete with chimneys and shades. (Number)										6			6
Mattress covers. (Number)			14	14	12		14	14	12				80
Mattresses, felt No. 1. (Number)			14	14	12		14	14	12				80
Mop handles. (Number)	1	1	1	1	1		1	1	1		1	1	10
Pillow cases, cotton. (Number)			48	48	48		48	48	48	112			400
Pillows, hair. (Number)			28	28	24		28	28	24				160
Pus basin. (Number)			1	1	1		1	1	1				6

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	Kitchen and personnel car	Convalescent ward car	Ward car	Ward car	Surgical ward car	Operating room	Ward car	Ward car	Ward car	Storage and office	Convalescent ward car	Officers' car	Total
	1	2	3	4	5	5S	6	7	8	8S	9	10	
Safe, iron A-21 D handle No. (Herring Hall Marmin Co.) (Number)										1			1
Sheets, cotton. (Number)			60	60	36		60	60	36	18S			500
Slippers, leather. (Pairs)			12	12	5		11	11	5				56
Spoons, table, silver-plated. (Number)			28	28	12		28	28	12				136
Stamp W.O., for marking hospital clothing. (Number)										1			1
Stocks, w.e. revolving. (Number)						2							2
Syringes fountain metal 2-qt. grad. (Number)			1	1	1		1	1	1				6
Table, operating. (Number)						1							1
Towels, bath. (Number)			14	14	12		14	14	12				80
Trays, bed with legs. (Number)			10	9	6		9	10	6				50
Trays, butler. (Number)			1	1	1		1	1	1				6
Tubes, rectal. (Number)						2							2
Tumblers, glass. (Number)	4	2	6	6	4	2	6	6	6	2	4	2	50
Typewriter, Royal, complete with metal cover and base board. (Number)										1			1
Bed, rests folding. (Number)			4	5	2		5	4					20
Bottles, tincture, 2-qt. (Number)										1			1
Chairs, folding. (Number)			14	14	12		14	14	12				80
Handbooks for HC Mason, (Number)													
Ice cream measure	1												1
Slippers, grass. (Pairs)			6	6	5		6	6	5				34
Waste receptacles. (Number)	1	1	1	1	1	1	1	1	1	1	1	1	11
Wash boards										2			2
Wringers, for linen. (Number)										1			1
Brooms. (Number)	10												10
Cans, g.i. (Number)	4												4
Case, guidon. (Number)	1												1
Guidon. (Number)	1												1
Locks. (Number)	24												24
Pans, incinerator. (Number)	2												2
Rakes, steel. (Number)	1												1
Stove, heating oil, perfection. (Number)	2												2
Staff, guidon. (Number)	1												1
Sprayer, compressed. (Number)	1												1

Ordinarily hospital trains operate from a more or less fixed point, which for convenience may be designated their "home station."

At these points there must be certain facilities for overhauling, cleaning, etc., and the train must be put into its "home station" or to some similar place, at more or less regular intervals, for repairs and renovation.

The staple commissary supplies are ordinarily procured at the "home station" from the Quartermaster Department, being replenished or supplemented at the point or points of entraining or detraining patients.

Fresh vegetables, fruits, milk, and such other perishable articles are carried in limited quantities only, owing to the comparative small amount of "cold" space available, and these supplies must be replenished as needed, at stations en route, by timely wire to the station master to procure and have ready for delivery, such articles as may be needed, on the arrival of the train.

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Ice for water coolers is supplied by the railway company hauling the train. That for cold boxes is obtained by purchase from the hospital fund in the same manner as are fresh vegetables, bread, etc.

There are provided 80 beds for patients, 120 berths for sitting cases, 28 berths for personnel, 14 sections for officers and 1 drawing room for officers.

Our manual for the Medical Department allows to a hospital train three medical officers; one sergeant, first class; two sergeants; two cooks; and twenty-two privates, first class, and privates (twenty nurses, two orderlies). In Hospital Train No. 1, the two cooks, Medical Department, were replaced by two cooks, Pullman Co., hired by the Medical Department; and ten of the privates, first class, and privates, by seven female nurses, Army Nurse Corps; the Pullman Co. maintains a porter on cars 1 and 10.

The personnel was assigned as follows:

The ranking Medical officer was in command, and also had charge of the mess.

One of the medical officers was in charge of the medical service; and the other in charge of the surgical.

The sergeant, first class, was in general charge.

One sergeant was in charge of section 1, comprising cars 1, 2, 3 and 4; he was also in charge of the mess.

The other sergeant was in charge of section 2, comprising cars 5, 6, 7, 8 and 9; he had charge of the property.

Cars 3, 4, 6, 7 and 8 each had a private, first class, in charge. In car 5, there was one private, first class, in the ward, also one in the operating room. In car 2 there were four privates; these men were also on general police. There was one female nurse, Army Nurse Corps, on duty in each of the following cars: 3, 4, 5, 6, 7 and 8. There was a chief nurse. For night duty there was one private, first class, and one female nurse. The female nurses alternated for night duty, only one nurse being on night duty at a time, being relieved during the day preceding her night tour by the chief nurse.

When the train was not in commission, one private, first class, or private was detailed as orderly. He was stationed in car 9 and his duties were to show visitors through the train, answer the telephone, etc.

The Pullman porters took care of cars 1 and 10.

Functioning of the Train.—The train operated on letters of instructions, which usually stated what hospitals were to be visited; the approximate number of patients to be taken on at each hospital; and to what hospitals or camps they were to be delivered.

The commanding officer of the train gave timely notice, by wire, to the commanding officer of the hospital, from which he was to receive patients, stating the probable time of his arrival, the approximate number of patients he was to take and the hour it was desired to entrain them.

When patients were presented for entraining, they were in charge of a medical officer, who had all of their papers, including the list of patients for the use of the train.

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The medical and surgical patients should be delivered separately as far as practicable; all of one class at a time.

As far as practicable, cars 3, 7, 8 and 9 constituted the medical wards, and cars 2, 4, 5 and 6 the surgical.

Medical property such as pajamas, sheets, blankets, etc., accompanying patients, was exchanged, at the time of delivery of patient, by the noncommissioned officer in charge of property, who obtained the necessary property from the car into which the patient goes.

After the patients were entrained and made comfortable, their clothes, etc., were checked and kept under their beds, the necessary ward papers made out, the procedure being the same as that pertaining to a post hospital.

Timely notice was given, by wire, to the hospital to which the patients were to be delivered, of the probable date and time of arrival, the number of patients and the number of litter cases.

On delivering patients, all medical department property accompanying them was exchanged at the hospital.

All of the soiled linen on the train was exchanged at the end of every trip, clean linen being put on all beds that had been occupied, dirty linen sent to the laundry and the train thoroughly policed.

The food for bed patients was obtained, by the wardmaster, in bulk, on a butler's tray, from car No. 1—and served to the patients, by the nurses, on trays with legs.

It was found more satisfactory to feed the bed patients thick soups, gruels, oatmeal, bread, coffee, tea, and chocolate, than to try a more varied and fancy diet, due to the fact that it was impracticable to serve the articles hot.

Fruit in abundance was provided and served to those able to eat it.

Dishes and silverware were washed in the ward to which they pertained.

In constructing and equipping future hospital trains, it would be desirable to obviate the waste space that exists in the present one. By so doing their carrying capacity could be increased from 200 to 258 patients. The ward cars should be equipped with diet kitchens so that they would be able to functionate for a limited time, attached to a regular passenger train. Plans embodying these features are now being prepared.

Trains for Patients.—These are improvised trains for carrying patients. Standard Pullman sleepers, Pullman tourist, baggage cars, box cars (especially those for automobiles and furniture) may be used. In the latter two, stanchions are placed and the standard army litter fitted in, or stanchions like those used on army transports could be used, with the canvas reefed in.

In foreign services, trains used for evacuation of the sick and wounded are hospital trains which are permanent, ambulance trains, which are improvised, and ordinary trains. The first were established in time of peace, in some countries by the War Department, in others by the Red Cross or other beneficent institution, *e.g.*, the Knights of Malta. Each great continental railway system before the war had the equipment of at least one such

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train in storage. These were "trains de luxe" and were used for the most seriously wounded. Their capacity varied from 128 to (rarely) 256. Each such train had ordinarily twenty-three cars of which sixteen were for wounded, two for personnel, and five for supplies. Ordinarily eight patients in two tiers were carried in each car. The cars had end-to-end communication and wide side doors through which patients were easily loaded and unloaded. They often entrained on the same cots on which they were brought from the hospital, at the head of the line of communication. This detail is very important.

The Knights of Malta furnished the Austro-Hungarian War Office twelve hospital trains, on the outbreak of hostilities, with a personnel drawn from their estates and trained in handling wounded. Other hospital trains utilized by the Central Powers were made up of day coaches, in which the seats had been replaced by berths, and into which patients were loaded through an aperture in the side of the car, closed by a movable panel. Other hospital trains consisted of Pullman cars or of dining cars. In these last the fittings had been replaced by double-decked standee bunks.

One well-equipped German hospital train, furnished by the Red Cross, consists of twenty-nine cars. Approximately half the cars are used for wounded and the remainder for surgeons, nurses, cooking, storage, disinfection apparatus, etc. In some German trains of this character linen is sterilized by steam from the engine, in others steam is developed in the sterilizing car. In yet others linen is sterilized in vats by lysol or phenol.

A Bavarian hospital train carries about 200 patients and has a personnel of forty-five, including three doctors, two clergymen, three female and twenty-two male nurses. It has fifteen hospital cars, fourteen for enlisted men, and one for officers. Each of the former has fourteen beds, the latter seven. Also one car is provided for operations and X-ray, one for disinfection, one for an illuminating plant, two for doctors, clergymen and female nurses, two for ten male nurses each, one for managers, one for kitchen purposes, one for provisions, one for linen, and three for baggage, etc.

The cars for enlisted patients carry superimposed stretchers in spring frames. The upper is removable. Bed side tables and all necessary accessories-closets, washstand, etc., are provided. The officers car is similarly equipped except that stretchers are replaced by spring cots.

The lighting car has a 12-horsepower gasoline engine-driven generator, supplying 380 lamps with 60-cell storage in reserve.

The linen car is amply equipped.

Telephones connect the different cars.

The French and British hospital trains usually consist of sixteen cars.

On the continent certain railways were subsidized to keep in service a certain number of cars especially constructed for conversion into hospital trains on short notice. Such companies also keep ready all the necessary fittings for this conversion. The hospital equipment and the medical and surgical stores for the hospital trains are held in charge in the army depots. These trains are specially intended for the transport of the severely sick and

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wounded from the zone of the field army directly to the general or base hospitals.

The cars provided for some of these hospital trains are freight cars which have means for end-to-end communication. They are heated by portable stoves and have special arrangements for light and ventilation.

AMBULANCE TRAINS IN EUROPEAN SERVICES

These correspond to a degree to our trains for patients.

In the Austro-Hungarian service "permanent ambulance trains" one for each army corps are formed when the order for the mobilization is given. They are made up of twenty-five cars and arranged as follows:

One brake van for baggage and equipment.

Seven cars for patients able to sit up (each car accommodates twenty patients).

Four cars for recumbent patients (each car accommodates eight patients).

One first or second class car for the hospital staff.

Four cars for patients lying down.

Eight cars for patients sitting up.

The twenty-three ward coaches of a permanent ambulance train take 364 patients, 64 of which may be recumbent.

The cars for patients lying down are fitted out like the ambulance cars of a hospital train; the cars for patients sitting up are passenger cars with a simple equipment. There was at first no kitchen car, it being assumed that the subsistence of the sick would be in the refreshment or rest stations of the army medical department, or of the Red Cross along the line of railway, but as the war progressed a kitchen car was added to each train.

The personnel of such a train is definite. It consists of one medical officer, two noncommissioned officers and twenty-three men of the medical department.

IMPROVISED HOSPITAL TRAINS

Improvised hospital trains are used in all armies. In order to effect such improvisation in our service 500 stands of the Beck apparatus have been purchased by our Field Supply Depot. These can be so adjusted in freight cars, that they will each accommodate three tiers of litters. Similar contrivances are used in foreign services, *e.g.*, the Linkweiler in Germany, the Bry-Ameline and Brechut-Desprez-Ameline in France.

Improvised trains are also prepared in the Austrian services by such a means as the following:

Against each wall of a freight car are fastened two tiers of sockets, at such distances that they support two rows of opened litters, by the handles on the engaged side of the litters which hang against the side of the car. Each engaged handle rests in a socket. Above each socket there is nailed to the wall a hanging strap with a loop at its free end. When the litters are

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brought out vertical to the side of the car, these loops are slipped over the handles distal from the side of the car and retain the litters in a horizontal position. A litter with a stronger cross brace than that which our service employs and one which is non-collapsible is essential. When going to the front these litters are lowered against the walls of the car and the vehicle may be filled with freight. This, however, is unusual, even for transport of medical supplies. When returning the litters are brought out vertical to the sides of the car for reception of the patients.

The personnel of an Austrian extemporized hospital train consists of: one surgeon captain as commander who has disciplinary powers of a company officer, one surgeon lieutenant, one pharmacist, four noncommissioned officers and thirty men of the hospital corps. Each such train is a complete rolling hospital.

In the French Army, ward utensils for equipment of each improvised hospital car, are kept assembled in units in depots for immediate distribution. These are such articles as a cup and water bottle for each patient, bed pans, urinals, spittoons, commodes, etc.

Some improvised trains in France are freight trains, which are returning to the rear, after having brought goods to the front. Each train consists of forty cars, able to carry 400 wounded. There are 396 beds, there being twelve for each of thirty-three cars, and four patients are seated in the car for the train personnel. The train is often loaded at successive stations, a portion of its load coming from each. The cars of these trains are if possible those having end-to-end communication and are provided with windows and other means of aeration. Such apertures are covered with metal gauze to keep out dirt and cinders.

The cars are arranged as follows:

Fifteen cars for wounded; two freight cars for freight and baggage.

One Pullman with compartment for senior officers.

One Pullman for subalterns.

One Pullman in case of need for four wounded.

Seven cars for wounded; two for freight and baggage.

Ten for wounded; one for freight and baggage.

The preparation of an extemporized hospital train in France is carried out according to a carefully prearranged plan in about seven hours. Each car is numbered and marked with the red cross. The personnel varies according to the nature of the cases carried but there is an average or normal quotum which may be augmented or diminished as the commanding officer of the line of communication considers necessary. In Russia trains can be equipped according to a system recently adopted, in two hours.

The land medical transport arrangements of the British Navy provide for the suspension of two tiers of cots from the roofs of the cars. They are protected against jarring by the vertical suspension, and by an almost horizontal spring which passes beneath the cot, and holds it against a buffer on the wall of the car. When there are no cots in the car, it contains only a few chairs which are easily disinfected. A full-sized train carries 136 cots

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and one of smaller size, 40 cots and 36 sitting cases. On routine journeys each patient has a cot for use at night. Extemporized seats are made of some of these during the day. All trains carry the provisions, stores, etc., necessary on a journey and are self-sustaining. A day ward is provided with benches and tables along the sides of the car. The table lifts up and exposes a row of wash basins.

Watches, day and night, are kept as at sea. Nursing is done by trained male nurses. No operating theatre is provided. The train is connected up by telephone and electric signalling devices are provided; also electric lights and fans. Cooking is done by gas carried in tanks under the kitchen cars and the two cars adjoining. Cars are heated by steam from the engine. Lavatory arrangements, etc., are provided for 10 per cent. of the train capacity and large storage facilities for water are provided. The office is located at the middle of the train. See also "Ambulance Trains" in the Chapter on Evacuation of wounded.

The "improvised ambulance trains" in Germany are intended solely for patients able to sit up during the journey. The equipment for these trains, similar to that provided in the French service, is stored in the advanced "medical supply field depots," so that each army corps is provided with the material for two ambulance trains. No definite scale of personnel is laid down for these trains; it is obtained from the line of communication troops or from the voluntary aid societies. The command of such a train must be given, as a rule, to a medical officer. Failing such, the train is commanded by an officer or noncommissioned officer of troops, but a medical officer or a local civil doctor must supervise the loading and unloading of the train.

These trains have little light and air. They are warmed with difficulty and danger. Intercommunication between cars is difficult unless they have end-to-end communication. The car springs are hard and heavy. Only the newest cars should be used.

The improvised ambulance trains are established and moved by order of the commander of the lines of communication in case there is an invasion of foreign territory, but in the home territory they are under the direction of the War Office.

ORDINARY TRAINS

Ordinary trains consist of all classes of cars, and transport those sick and wounded who can sit up for the entire journey. They may in the event of a reverse, carry all the wounded, irrespective of their condition, that can be crowded on to them.

The composition of such a train will depend on the number of patients and on the cars available. These trains may run by day only. The care and feeding of the sick and wounded are provided as well as possible by the rest or refreshment stations along the line of route.

Cars are disinfected either by sealing apertures and employing formalin or sulphur dioxid, or in some services are rolled into air tight buildings in which the gas is then developed.

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In the service of the Central Powers, the rail journey for wounded from the front to the base frequently takes five days. In the Allied services, the rate is from 15 to 25 miles an hour on a double-track railway—on a single-track it is less than half of that. An average of two trains per hour is as high as can be expected.

Hospital trains at congested points are not loaded nor unloaded at the ordinary platforms, but on sidings, etc. Small platforms at way stations are to be avoided. The yardmaster or freight office usually can indicate promptly the most suitable point. There should be a place where ambulances can park near the loading point and the approach to the train should be such that after discharging their loads, the empty ambulances can leave without interrupting others. Gasoline or other torches should be provided, in the absence of other illumination, at night. Guards and "checkers" should be detailed. Facilities for refreshment, such as provided by a dressing station should be arranged for, and latrine accommodations installed at all loading and unloading points.

An American Red Cross Hospital Train recently completed for service in France consists of 16 cars as follows: ward cars 9, kitchen cars 2, infectious car 1, pharmacy 1, staff 1, personnel 1, brake and stores 1. Cars are 54 feet long with all modern appliances, viz, air-brakes, vestibules, electric lights and fans, etc. and the exterior is khaki colored but marked with the red cross. Floors are covered with linoleum or lead, painted with aluminum paint, sides and roof are white enameled. Water (2835 gallons) is carried in tanks on the roofs, giving 150 gallons to each ward, 300 to the pharmacy, 300 to each kitchen, and 195 to the infectious ward. The infectious car has 4 compartments of 6 beds each. The staff car contains sleeping compartments, dining-rooms, lavatory and bath facilities, wardrobes, book-racks, etc. for officers and nurses. The personnel car is similar to a ward car but has lockers and kit-racks. The pharmacy car has a linen room and storeroom for drugs and dressings. One kitchen car is equipped with an Army range, a Sayer stove, ice box, dining table and seats, and a compartment for cooks. The other, in addition to similar equipment for the enlisted personnel, has a storeroom for commissary supplies.

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CHAPTER XI

HOSPITAL SHIPS

Hospital ships are provided for transportation of sick and wounded, of sanitary personnel and of sanitary supplies. Their primary use, to which they are usually restricted, is the transport of the incapacitated with only the provisions and supplies necessary for their welfare. The personnel and equipment are determined according to the needs in each case. The administration of its hospital service is analogous to the service of a hospital ashore but the rules for ward administration, and for the government of the hospital corps and nurse corps need not be so numerous, as few such rules are quite adequate to meet requirements. In effecting transfer of sick and wounded the Stokes litter has proven more serviceable than the Army litter and the Drill Regulations of the Navy Hospital Corps more applicable than those of the Army.

For the care of the records of such sanitary personnel as are casually on board, there should be a separate department of the office force. Upon its accuracy depends the condition of the accounts, etc., of the members of the transient hospital corps personnel. Errors made lead to much delay in their settlement, and much inconvenience to the parties affected. There should be maintained three sets of records:

1. For the permanent detachment on board the vessel.
2. For those members of the Medical Department casually on board.
3. For patients.

In addition to transporting supplies for its own needs, the hospital ship may act as a medical supply depot. One of the medical officers on board should be placed in charge of this department and be personally responsible for the receipt, expenditures and condition of supplies and for the accounts pertaining thereto. He should as a rule receive supplies from base depots and invoice, except in cases of emergency, to advanced depots only, so that receipts and transfers may be reduced to a minimum. So far as possible distribution should be made in original packages.

A quantity of "knockdown boxes" should be kept on board and assembled for use when required. Lack of material for boxes and crates was a source of serious inconvenience to the Hospital Ship "Relief" in the early period of the insurrection in the Philippines.

The following regulations, derived in part from those for United States naval hospital ships (as indicated at several points in the text) are adaptable to hospital ships of the Army.

GENERAL REGULATIONS

1. Naval hospital ships shall consist of such vessels as may be designated by the Department. When commissioned or in service, they shall be con-

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sidered floating hospitals, for the purpose of caring for, treating, and transporting the sick and wounded of the Navy, Marine Corps and Army, as well as shipwrecked or other persons requiring medical attention, and as such will be under the general direction of the Bureau of Medicine and Surgery. Action upon all matters pertaining to the distinctive hospital features of the ship, detail of medical officers and hospital corps shall be upon the recommendation of the Bureau of Medicine and Surgery. No other person other than those above mentioned shall be transported in hospital ships.

2. Hospital ships shall be governed by the laws of the United States, by the Navy Regulations, by these regulations, and by the provisions of the Hague Convention of October 18, 1907, making applicable the principles of the Geneva Convention of July 29, 1899, to such ships.

3. A hospital ship being assimilated to a naval hospital on shore will be commanded by a naval medical officer not below the grade of surgeon detailed by the Navy Department. Such vessels will be manned by a merchant crew and officers and in addition a detail from the hospital corps of the Navy for carrying out the service to which the vessel is specially assigned.

4. Hospital ships will be regarded as naval auxiliary vessels and will be subject to the inspection, care and supervision of the Supervisor of Naval Auxiliaries, as far as concerns the non-medical portion of the ship, and who shall also be responsible for the management and security of all property not under the Medical Department.

5. All hospital ships shall be distinguished by being painted white outside with a horizontal band of green about a meter and a half in breadth. The boats shall be distinguished by similar painting. In accordance with the terms of the Geneva Convention, all hospital ships will fly the Geneva red cross flag at the main in lieu of the narrow pennant or coach whip.

6. (*a*) No hospital ship, nor any of its boats or appurtenances, shall be used for any other purpose than that necessary for the peaceful and humane service to which the vessel is assigned.

(*b*) The neutrality of the hospital ship will at all times be preserved.

(*c*) No guns, ammunition, except such as may be necessary to maintain order and defend the sick and wounded, or other articles contraband of war, except coal or stores necessary for the maintenance and movement of the vessel, shall be placed on board; nor shall the vessel be used as a transport for the carrying of mails, despatches, officers or men not sick, disabled, or shipwrecked, other than those regularly attached to such vessel.

7. Hospital ships shall use the International Code in making flag signals. The use of night and day wigwag and semaphore system and the Adrois apparatus are authorized, and such members of the completement as are assigned for this duty, should be encouraged to become proficient therein.

DUTIES OF COMMANDING OFFICERS

1. The medical officer in command of a hospital ship is directly responsible to the Bureau for the efficiency, care, and preservation of the vessel under his command.

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2. He shall engage the services of the best available men as master and engineer of the vessel, and shall be responsible for the maintenance of good order and discipline of those on board.

3. He shall issue orders to the master as to the duty required of the vessel and shall see that these orders are executed in a systematic and orderly manner, and that the engineer has abundant warning of the duty expected of the vessel, and ample time for the preparation of the machinery and auxiliaries in his department.

4. He shall advise frequently with the master and engineer as to the needs in their respective departments, and shall give timely notice to the Bureau of any repairs or improvements which become necessary from time to time so far as the same may be anticipated. He shall make definite recommendations as to such repairs, accompanying them by an estimate of cost when practicable.

5. He shall see that the strictest economy of fuel, stores, and supplies is observed, and that the vessel is always in the highest possible state of efficiency.

6. He shall see that the regulations in regard to uniform are strictly observed by the master and all others on board the vessel, and that the vessel presents a uniformly neat and creditable appearance.

7. He shall give particular attention to the painting of the vessel, and will see that the regulations in regard to painting are carefully complied with.

8. He shall make recommendations for the docking and painting of the bottom of the vessel, as often as may be necessary to preserve her efficiency and prevent deterioration and corrosion.

9. The commanding officer shall be governed by the Navy Regulations in all respects, as far as they are applicable to him as the officer in command, of a naval hospital and medical supply ship. Under these Regulations he shall have full authority in all matters concerning the discipline and punishment of the naval portion of the crew.

10. In the absence or during the disability of the officer in command, the command shall devolve upon the medical officer next in rank attached to the vessel, until relieved by proper authority.

11. All orders for the ship will be given to and through the commanding officer. He will have the general direction of the movements of the vessel, leaving, however, the master to exercise full and unquestioned control and authority over all matters within his technical purview, and for which he is professionally responsible. Any orders from the commanding officer relating to other than the medical departments of the ship will be given to or through the master.

12. The officers and crew shall be arranged in messes in such manner as the commanding officer may direct, in accordance with the customs of the service and the provisions of the Navy Regulations.

13. A sufficient number of men of the naval crew will be directed to report to the master for assignment to and instruction in the lowering and handling of such boats as the latter may consider necessary.

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14. The commanding officer shall see that the emergency drills, including those of fire, collision, abandoning ship, and "man overboard" are held with such frequency as may be considered necessary under the master's supervision, and at those drills the naval crew shall be stationed.

In addition to complying with the above regulations the commanding officer should make frequent inspections of the vessel her hull, machinery, and equipment and satisfy himself that the reports called for by regulations are the result of critical examinations and inspection on the part of the master and engineer.

When a ship is out of commission, either temporarily or for a season, or is laid up for repairs, or held in readiness for service without a full crew, the medical officer in command should forward "Monthly Report of Repairs."

Unless the authority of the Bureau has been obtained, medical officers and masters or pilots should make no alterations in the outside paint work of a vessel which would tend to materially change her general appearance, after the painting as prescribed has been carried into effect. Nor should they without permission make any material change in the interior paint work of apartments of any vessel. Furthermore, no radical alterations of machinery or auxiliaries, or other structural changes on the steamer should be made without previous authority from the Bureau.

The medical officer in command is the representative of the Medical Department on board the ship, and all orders for the ship should be given to and through him. He should have the general direction of the movements of the ship and should be in general charge of its business and responsible for the proper care and disposition of the passengers and freight until delivered at destination, leaving, however, the master and chief engineer of the ship to exercise full and unquestioned control and authority over all matters within their technical purview, and for which they are professionally responsible as the immediate heads of the deck and engine departments. Any orders to be given by the medical officer in command touching the deck or engine departments should be made to or through the master.

The medical officer in command should be furnished on the day previous to sailing or day of sailing, the names of the patients and other passengers assigned to the ship. He should make assignments of staterooms and wards, and cause to be given to each patient or other passenger upon his arrival on board the number of his stateroom if one such is available or assignment to a ward.

As a rule separate staterooms should be provided for general officers and for field officers. The quarters permanently assigned to the master and officers on board the ship, or other permanent officers of the ship will not be available for assignment.

Neither the wives or members of families of the commissioned officers on duty on the ship, or of the ship's officers, should be permitted to accompany them on the ship at sea.

Whenever any hospital ship arrives at or is about to depart from a

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terminal port on a transoceanic voyage, its arrival or departure should be reported by the medical officer in command to the chief surgeon of the department in which the port is located or of the forces occupying that port. The report in each case should show the name of the ship, the date of arrival or departure, the number of patients and the names of officers who are patients on board. The report should be telegraphed or cabled if the department headquarters are so far from the terminal port that it is impracticable for the medical officer commanding the ship to deliver the report in person or by messenger. This report should not include either the names or number of officers or enlisted men, not passengers, who are serving under regular detail on the hospital ship.

Upon the arrival of a hospital ship at a foreign port the medical officer in command should call in person at the United States embassy or legation, if there is one at the port. He should also call at the United States consulate, and report the arrival of his ship in port.

The commanding officer is charged with the preparation of all the ship's papers required by law and prescribed by the surgeon general.

He must if necessary make all arrangements for having the crew sign the ships articles, etc., and have on board the official log, copy of agreement with the crew, officers and engineers certificates.

In case of death among passengers on any hospital ship, *i.e.*, officers and any Army enlisted men not belonging to the permanent detachment on board as well as civilians and employees, the medical officer in command should secure the effects and prepare a letter to the nearest relative setting forth the name, rank, company, regiment, employment or condition of the deceased; place, cause, day, and hour of death; disposition made of remains and effects, and list of the latter, and mail the communication at the earliest opportunity. Such notification of death in case of an officer, enlisted man, or civilian employee in the Federal service should also include the information that, if it be desired, the remains will be shipped home at Government expense upon application therefor, by the nearest relative, addressed to the Quartermaster General, United States Army, Washington, D.C.; but if not applied for within six weeks after arrival in port in the United States the remains will be buried in a post or national cemetery and will not be disinterred thereafter and shipped home at public expense. The notification should also state that inquiries concerning the pay and effects of deceased officers and soldiers should be addressed to the Auditor for the War Department, Washington, D.C. and in the case of civilian employees, to the staff bureau of the War Department under which they were employed.

The medical officer in command should be provided with printed plans of all decks of his ship.

The medical officer in command should see that his ship is properly supplied at all times with the necessary commissary supplies, mess utensils, scrubbing and cleaning materials, disinfectants, etc., medicines, surgical and other appliances and that wards and cabins are provided with all the necessary furniture, bed linen, towels, etc.

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To each hospital ship should be assigned a quartermaster, when required by the nature of the service. If none such is assigned the commanding officer should designate a subordinate to perform special duties pertaining to the supply service.

In all cases unless otherwise directed, the commanding officer should procure a bill of health before leaving port.

Upon the arrival of the ship in port he should be prepared to receive the health officer and exhibit to him the bill of health; also to answer any questions that may be asked concerning the sanitary condition of the ship.

During the prevalence of epidemic or contagious diseases on foreign stations, especially in ports of the Gulf of Mexico, the West Indies, and South America, the senior medical officer of a ship cruising in this vicinity should forward through official channels all reliable information relating thereto that he may be able to procure.

On the first of January of each year and at the end of the cruise, he should make to the Surgeon General a sanitary report which would include a report of the sanitary conditions of the ship and station, accounts of epidemics, recommendations or cautions that may be of service to other ships visiting the ports during the year, information of the health of the personnel or ships of the station, and any facts of professional interest not generally known concerning ports visited.

In battle, if accompanying a fleet, he should have charge of the sick and wounded and take station at a place designated by the commanding officer of the forces with which his ship is serving.

He should make recommendation in reference to the sanitary features of his ship, whether under construction or in commission, regarding berthing, ventilation, location of quarters for the care and treatment of the sick and injured; and of the provisions for the care of the wounded.

He should frequently inspect the water supplies used for drinking, cooking and bathing purposes. He must provide for the care of the sick and wounded, and the physical examination of officers and enlisted men. He is responsible for the management and control of his ship and of its internal organization and administration.

JUNIOR MEDICAL OFFICERS

15. Such additional medical officers as the Department may assign should be attached to a hospital ship; their duties should be as prescribed by the commanding officer.

CIVILIAN COMPLEMENT

General Rules

16. The civilian officers and members of the crew should be classified as in the Naval Auxiliary Service, and the complement of the personnel should be as specified by the Bureau of Navigation, U. S. Navy.

17. In all matters relating to uniforms, appointments and shipments,

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discharges and desertions, and punishments, the provisions of the Regulations for the Naval Auxiliary Service, as far as they apply should be followed, and the master should at all times confer with the commanding officer concerning all matters upon which the latter should be informed.

18. All members of the civilian crew must make themselves familiar with the rules and regulations of the hospital ship and observe them strictly. For this purpose copies of these rules should be supplied to the heads of the departments for the use of their subordinates.

19. Every person exercising authority of any kind is required to exact from all under him prompt and implicit obedience to and cheerful compliance with his orders, and it is required of all that they observe a proper demeanour whenever they address or are addressed by their superiors.

20. They should in their intercourse with each other and with all others on board observe a decorous and civil deportment.

21. The prescribed uniform should habitually be worn on board ship and at all other times and places. The crew must present at all times a neat, clean and orderly appearance.

22. Improper, profane, or boisterous language or conduct should be strictly forbidden.

23. While on duty no one should smoke. He should not engage in any conversation or occupation not directly connected with his duty.

24. No person should be engaged in the conveyance or transport of any articles or packages other than such as are officially authorized, or in any traffic, sale, or barter on board ship.

25. In port an officer and a quartermaster should always be on duty.

26. When in port care must be taken that the harbor and dock regulations are not violated, *e.g.*, by throwing refuse overboard or by other forbidden action.

27. The ship's log must be a careful, detailed, and accurate record of current events. No erasures are to be made in the log nor any leaves removed or closed up. Any errors in the log are to be corrected by ruling lines through them in red ink and attaching the initials of the officer making the alteration.

28. No intoxicating liquors of any kind should be brought or used on board.

DUTIES OF MASTER

29. The master shall have full and paramount control of the navigation of the ship and be responsible for the discipline and efficiency of the civilian crew. He must maintain and enforce strict discipline at all times and require his authority and the authority of the officers to be thoroughly respected by all subordinates on board.

30. He must make himself thoroughly familiar with the regulations of the service and the orders made from time to time, and will be responsible for their strict observance.

31 He must see and satisfy himself that his vessel is in all respects

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seaworthy and properly fitted out, directing special attention to the hull, boats, davits, rigging of all kinds, steering gear, pumps, fire apparatus, lights and signals, air and side ports, ventilators, gangways, companion ladders, etc.

32. He must pay close attention to compasses and chronometers and see that no opportunity is neglected to ascertain their errors and have the same noted for future comparison.

33. He must acquaint himself with the navigation laws and rules, the customs and quarantine laws and regulations of the United States, and conform to them in all respects.

34. He shall be in daily attendance on board, and not absent himself without the knowledge and authority of the commanding officer.

35. Before leaving the ship the master will inform the first officer and give him instructions as to the care of the ship during his absence.

36. He shall have the ship ready to sail precisely at the time appointed.

37. (*a*) He shall strictly comply with the International Rules for preventing collisions and other accidents on the high seas and inland waters.

(*b*) He shall see that the lights required by law at sea and port, are kept in good order and burning during the night, and that there are at hand, convenient for use, means for relighting or replacing any such light as may be extinguished.

(*c*) He shall specially attend to stationing the crew for emergency drills.

(*d*) When under way on soundings, or when nearing land, approaching an anchorage, or when necessary to verify the ship's position, he shall have casts of the lead taken frequently.

38. He is to be held responsible for the safe conduct of his vessel, notwithstanding the presence of a pilot, and also while bringing the ship to piers and docks, and he will be strictly responsible for accidents occurring.

39. He must himself take the bridge in thick weather and when approaching and leaving land, and keep it as much as possible while in channels or crowded waters, especially during the night..

40. He shall enter regularly in the night order book the course to be steered and all necessary instructions to the officer on duty, and this book shall be initialed every night by the deck officers.

41. He is to take care that the boats of all kinds are constantly ready for service, with all the gear in them properly fitted, and ready for hoisting out; that the boat falls are kept rove, and the lowering apparatus ready for use.

42. The crew is to be properly organized for service of the boats and exercised in getting them out and in handling them.

43. They must also be organized for fire service and drilled in the use of the fire apparatus. Each day before sunset it is to be ascertained that the fire apparatus and pumps are ready for immediate service, with the hose coupled, and that the buckets with lanyards are at hand and kept filled.

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44. The master is to take care that cleanliness, dryness, and proper ventilation are at all times observed, and any neglect or inattention in regard to cleanliness or any other matter affecting the discipline of the ship, which the master may observe on the part of the naval crew, he will report to the commanding officer.

45. Collisions, groundings, and similar occurrences shall be entered in the ship's log book, with full and exact particulars.

46. In case of collisions or other occurrences of like nature, he shall at once prepare and forward a written report signed by him, through the commanding officer, to the Navy Department (Bureau of Navigation) detailing the circumstances in connection with the occurrence. If he is not on deck at the time of the casualty, he shall, for the purpose of making his report, obtain from witnesses written statements of all the facts.

47. The master shall certify to the correctness of the quarterly statement, made by the pay officer to the auditor, showing the total number of rations issued to the civilian crew.

DUTIES OF FIRST OFFICER

48. The first officer is the aide to the master, and, subject to his instructions, is particularly responsible for the good order and cleanliness of the ship, the discipline and efficiency of the crew, and the serviceable condition of all navigation and deck appliances.

49. He shall prepare and keep corrected to date, complete watch and station bills, which are to be posted in some conspicuous place where the whole ship's company can see them and perfect themselves in their several stations, and no alterations must be made in them without the master's knowledge and approval.

50. He shall make no alteration in the ship or rigging without consulting the master, and shall cause to be frequently inspected by the proper officer every part of the ship and see that she is clean and in proper condition, and make his report to the master.

51. He shall when at sea, keep the boats adapted as life boats one on each side, always ready for lowering. He shall see that in these boats are always kept life preservers, water, bread, a compass, and a lantern with a reserve supply of oil and means of ignition; that the detaching apparatus is in order and ready for use, the steering car shipped, and such other disposition made as will render these boats most effective and safe in a sea way and as life boats. In port, one or both life boats shall be kept ready for immediate use, from sunset until colors next morning. A moderate supply of provisions and water shall be kept accessible for all boats in case it may be necessary to abandon ship.

52. He shall see that the life buoys are in order and constantly in readiness; that they are frequently tested by dropping; and that when at sea an efficient person is stationed by them.

53. When the night watch is set, he shall have the hose coupled, buckets

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in place, and the ship ready throughout for any emergency, and report these preparations to the master. Each lookout must call his station every half hour when the ship's bell strikes.

54. He must not permit anyone on board without authority, nor allow any friends of the crew or others to be on board without permission from the commanding officer.

DUTIES OF DECK OFFICERS

55. The duties of the deck officers shall be performed in conformity with the provisions of the Navy Regulations, as far as they may be applicable. The deck officers will be responsible to and communicate directly with the master.

ENGINEERS DEPARTMENT

56. The chief engineer is responsible for the care and good management of all steam, propelling, pumping, hydraulic, refrigerating, electrical, auxiliary, and other machinery on board, and all air, water, and steam pipes for sanitary, ventilating, heating, cooking, and other purposes. He shall use all the resources of his department to keep the machinery in proper working order, and make the required reports of its performances, condition, and necessary repairs to the master, who will forward the same to the Navy Department. He will supervise and keep himself fully acquainted with all repairs and alterations made in port.

57. He is responsible to the master at all times for the general supervision and conduct of his department.

58. He will have control under the master over all persons in his department and will see that strict discipline and efficiency are maintained at all times.

59. He will keep the watch, fire, and boat station bills in prominent and accessible places for the observation of the engineering department crew and see that they are familiar with their respective stations.

60. He will keep the engine room log, according to the form prescribed, being careful in making all entries and in recording the times when the various orders to the engine room are received.

61. When under way, if from any cause he may find it necessary to stop his engines, he must at once acquaint the master or officer and, if practicable, consult the master before stopping the engines.

62. He will see that the engines are worked accurately to signals from the bridge or deck, and also keep accurate memoranda for entry in the engineer's log. Before making official entry of any memoranda of this kind he should confer with the deck officers as to the same occurrences or transactions.

63. He is relieved in no part of his responsibility for the care and safety of the ship in port, and must at all times keep a sufficient number of men on board to operate necessary machinery according to the direction of the officer of the deck.

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64. Before arrival in port, he will prepare a careful list of all repairs, alterations, or changes that he may deem necessary in his department.

65. Upon arrival in port after he has had notice that the main engines are no longer required, he will see that everything in the engine and fire room is secure and safely disposed of and his department generally cleaned up.

66. He must be present during the overhauling of the engines and boilers and exercise supervision over all repairs and alterations made in his department.

67. He will also see that the ship is at no time left without an engineer on board. The duty of keeping watch at night in port in regular service, or when undergoing repairs, must be divided among the assistant engineers, according to the judgment of the chief engineer, provided always that the men left in charge are sufficiently well acquainted with all pipes and pumping facilities to work them promptly in case of emergency.

68. The chief engineer will at all times keep in view economy and high efficiency in his department and never fail to impress the importance of these considerations on his subordinates.

69. He will comply with the provisions of Chapters XVIII and XIX of the Navy Regulations as far as they are applicable.

The student of this subject should examine the Navy Regulations, the Manual of the Medical Department, U. S. Army, 1916, and the Manual for Transport Quartermasters, U. S. Army.

BOAT CEREMONY AND DISCIPLINE

(From the regulations of the Department of Public Health)

In taking places in a small boat it should be arranged that juniors in rank and official importance should enter the boat first, and the senior or highest in rank and importance last.

In disembarking from a boat the reverse order should obtain, the senior in rank or in official importance leaving the boat first, the junior last.

The intention of the ceremony is obvious; a senior should never be compelled to wait upon the movements or convenience of a junior.

In the following instructions the medical officer is supposed to have notified the master or pilot that he wanted the gig or other boat. The boat should be at the gangway or side ladder, the crew seated at their places, and the boat fended off from the steamer's side forward and aft by the boat hooks in the hands of the stroke and bow oarsmen. The medical officer should be attended to the gangway by the master or pilot, and will note that the boat is in good order, the ensign stepped on its staff in the stern, and that the tiller ropes are at hand. The embarkation will be made in the order given above, and all being seated the medical officer will command "Shove off forward" when the man in the bow will shove off, stow his boat hook, and lay his hand upon the oar.

The next order will be "Up oars" when the crew will simultaneously

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raise their oars briskly to the perpendicular, and hold them thus directly in front of them, the blades being fore and aft, the ends of the oars being held clear of the boat's bottom; the oarsmen sitting on the port side of the boat holding the oars with the right hand lowest, those on the starboard side holding the left hand lowest.

The next order will be "Let fall." The oars must be dropped into the row-locks together, care being taken to prevent them from striking the water and splashing; blades flat to the water and leveled.

The next order will be "Give way" when the crew begin rowing, taking time and stroke from the stroke oar.

In running alongside a wharf or vessel, give the boat way or impetus sufficient to reach, and while the oars are in the water the command should be given "Way enough."

The oarsmen will finish the stroke, and then raise their oars simultaneously to a vertical position, and lay them with as little noise as possible in the boat, the blades pointing forward. The stroke and bow oarsmen take their boat hooks, and as the boat runs alongside, they hold her, and stop her way.

With a boat pulling four or more oars, just before the order "Way enough," the order should be given "In bow" when the bow oarsman will stop his oar as above and grasp his boat hook.

If it is required to turn a boat suddenly to avoid collision the order "Give way starboard; back port," or "Give way port; back starboard" will be given. When the boat has been pointed in the desired direction, the order will be given "Give way all," and the regular stroke will be resumed.

In the hospital ships of the British navy described by Lomas in the British Medical Journal, No. 2939, there are as a rule six or seven wards for men and two or three for officers. They are adapted by converting portions of two saloons or removing bulkheads. Some officers are cared for in cabins. The vessels employed were intermediate liners which could easily be adapted. Each accommodates usually about 220 patients. A padded room is provided for mental cases. Ventilation is maintained by scuttles, supply and exhaust cones and special motion-driven supply ventilators. Dispensaries, pantries, latrines, mortuary, disinfecting plant, laundry, pathological and electrical laboratories, operating rooms, etc., are provided. The operating theatres are placed in music rooms or saloons or in specially fitted constructions on the upper deck. The rooms are divided into two by sliding doors, one-half being used for preparation and anesthetizing. Floors are tiled and walls covered with match board covered with white enamel paint. The elevators for cots are placed near the operating room.

These ships serve fleets at their bases. Cots are hoisted aboard from the picket boats or cutters by steam cranes which operate lifting platforms that will convey either a service cot or stretcher. Wounded are also loaded directly from destroyers or light cruisers. Severe cases are kept, as a rule, like those in evacuation hospitals only until they can be sent to other

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hospitals. One ship in the British service has been set apart for the treatment of zymotic diseases.

When patients are landed, they are turned over to the Medical Land Transport of the Naval Medical Service. The patient, when landed in his cot, comes under the care of bearers specially trained in the handling of cots, who carry them to the hospital or train. They are immediately replaced by empty cots and bedding. At all subsequent transfers of patient the same exchange of cots and bedding is made in order to avoid removal of the patient from his bed.

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CHAPTER XII

THE BASE HOSPITAL

The following notes concerning base hospital administration are drawn chiefly from Base Hospital No. 2, at El Paso, Texas, under Colonel Paul F. Straub, and to a degree from Base Hospital No. 1, at San Antonio, Texas, under Colonel Merritte W. Ireland. Most of the data from the former source were furnished by Captain Floyd E. Kramer, from the latter by Major R. F. Metcalfe. At the time the following regulations were in effect the former unit accommodated 1100 patients, the latter 600.

In Base Hospital No. 1, few orders were published. This is an excellent practice in units whose personnel is acquainted with military methods, but when the reverse is the case or the personnel shifts rapidly, a larger degree of regulation is advisable.

The duties of the several officers are indicated in the regulations following. The work of several offices was classified and conducted as indicated in the following synopsis.

Record Office

Chief Clerk:

Correspondence, commanding officer and adjutant.
Inspection of all papers for signature of commanding officer and adjutant.
Hospital orders, special orders, circulars and memoranda.
Personal reports, medical officers.
War Department correspondence file.
Disposition of remains and effects (deceased soldiers).

Sick and Wounded Department:

Reports of sick and wounded (regulars and militia).
Reports of transmissible diseases.
Reports of sickness (G.O. 31 or 45).
Reports of death.
Special reports in certain diseases (telegraphic, etc.)

Patient's Accounts, etc.:

Patient's service records.
Patient's payrolls and muster rolls.
Medical histories and proceedings of disability boards.
Correspondence re patient's property.

Directory of Patients:

Card index of all patients in hospital and their location, Summary Court records.

Detachment Office

Desk No. 1, Sergeant, First Class:

In charge of office, supervision and check of all papers received and forwarded
Check of all routine papers.
Prepare Summary Court, and other court charges against patients.

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Desk No. 2, Sergeant:

In charge of preparation of payrolls—muster rolls—return of enlisted men Medical Department.

Recording and filing correspondence.

Clothing requisitions, preparation of individual slips, drawing and issuing of clothing. Sizes of clothing.

Desk No. 3, Sergeant:

Service records, enlisted men Medical Department, and attached enlisted men Medical Department.

Assistant on clothing requisition, issue and accounts.

Delinquency records and data for changes in classification, detachment Medical Department.

Physical examination, semi-monthly.

Desk No. 4, Sergeant:

Care of morning report, status report, record cards of detachment

Assistant in preparation of muster rolls, payrolls, return of enlisted men Medical Department and post return.

Desk No. 5, Sergeant:

Preparation of daily emergency squad list of detachment Medical Department, and notifying men on same.

Charge and preparation of officer of the day duty roster.

Preparation of pass list of detachment Medical Department, and patients.

Information.

Sick and Wounded Office

Desk No. 1, Sergeant, First Class:

Supervision of sick and wounded work.

Daily: Morning reports of sick and wounded.

Daily: Ration return to the mess office.

Check telegram to the department surgeon.

All correspondence pertaining to sick and wounded.

Death certificates, report of death (letter) and completion of sick and wounded cards for all death cases.

Check all daily work in sick and wounded office as far as possible.

Sick and wounded report and check same for monthly report to department surgeon.

Desk No. 2, Sergeant:

Prepare special index cards. One for information desk and one for P.O.

Keep index of patients in hospital alphabetically, showing the date of admission and the wards to which patients are assigned.

Check morning reports of wards daily and arrange charts and cards for the disposition list.

Receive Summary Court charges after preparation, for patients and Medi al Department men, call them for trial and complete and dispose of same after trial.

Keep muster sheets of patients and assist in their preparation.

Desk No. 3, Sergeant:

Daily blotter of admissions and dispositions from individual admission cards from receiving office by register number and showing dispositions, etc., under proper date.

Keep index to register of patients; live file by organization; dead file alphabetically.

Block out register and report cards from the transfer cards or individual slips from the receiving office.

Daily telegram to department surgeon showing status of hospital.

Desk No. 4, Sergeant:

Pneumonia report to chief of medical service at 8:00 A.M. daily.

Report of contagious diseases (dispositions) to district surgeon 10:30 A.M.

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Report to organization commanders of transmissible diseases admitted daily, Par. 201, M.M.D.

Report to company commanders of patients returning to duty under G.O. 31 and 45.

Weekly telegram to department surgeon showing number of patients admitted, disposed of and remaining with classification of diseases.

Assist in checking sick and wounded report.

Desk No. 5, Sergeant:

Filing of charts of all patients that have been in hospital.

Filing of register and report cards of completed cases.

Filing of register and report cards of all patients in hospital.

Entering of diagnoses, complications, additional diagnoses, intercurrent diseases, changes of diagnoses and operations on register and report cards of patients in hospital.

Completing of register and report cards of patients leaving hospital.

Collecting of diagnoses of patients remaining in hospital at the end of each month.

Assist in checking sick and wounded report and making of nominal check list.

Property Office

Desk No. 1, Hospital Sergeant:

Supervision of procuring and storing supplies for hospital, medical, quartermaster and signal.

Receiving supplies and checking with invoices.

Issuing and exchanging supplies weekly on approved requisitions.

Exchanging of linen daily.

Keeping accurate check on liquors and opiates.

Purchasing additional supplies under the direction of the surgeon.

See that *all* doors to storerooms are locked and retain keys, let storekeeper have keys to inside doors when necessary.

Prepare letters to quartermaster from time to time requesting estimates be made for new construction and repairs to hospital and hospital steward's quarters.

Check over all papers received or forwarded.

Check entries on return as far as possible.

Prepare a location card system so that all non-expendable property may be located at a glance.

Receive reports from all departments of the hospital where repairs may be needed, and give orders to carpenter, plumber and painter as to the work to be done.

Desk No. 2, Sergeant:

Prepare receipts of property received.

Prepare invoices of property transferred.

Prepare surveys of unserviceable, lost or stolen property.

Prepare monthly check list of liquors and narcotics.

Prepare abstract of medical property *short* or in *excess* in each ward and departments, monthly.

Prepare vouchers for payment of supplies purchased in the open-market and the necessary invoices for same.

Prepare vouchers for services rendered other than personal.

Prepare accurate lists of property in each ward and department and file same.

Prepare quarterly report of motor ambulances to department surgeon and quartermaster.

Prepare monthly report of motor ambulances to department commander.

Prepare inventory and inspection reports for unserviceable property.

Prepare all correspondence pertaining to property.

Prepare monthly report of construction and repairs to S.G.

Prepare requisitions of medical property, as required.

Prepare return of medical property in duplicate and post items of property received and transferred.

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Prepare laundry vouchers.
Prepare gas vouchers.
Prepare account current for medical property (condemned) sold at auction, and abstract for same.
Prepare account current for medicines sold to civilians, and abstract for same.
Prepare notification of deposit of funds in the Treasury of the United States, obtained through the auction of condemned property and sales of medicines to civilians.
Prepare requisitions for blank forms.
Prepare invoices for transportation of medical property.
Prepare report of open-market procurements of supplies, or services not personal, exceeding $100.00.
File all correspondence pertaining to property.
File all supply letters, circulars, general orders and bulletins pertaining to property.
Post the issue of expendable property on the return.
Supervise the issue of property in the absence of the property sergeant, in charge.

Desk No. 3, Storekeeper, Private First Class, and One Assistant:

Pack and unpack property received and sent.
Make double check of all property received and issued.
See that no boxes or crates leave the storeroom until their contents have been checked with the packer's list.
Place all property, received into the storeroom on the shelves in accordance with the sequence in the supply table of the Manual of the Medical Department.
Make all repairs to property that can be done.
Keep the storeroom in a neat and tidy condition.
See that no property leaves the hospital without a receipt O.K'd. by the property officer or property sergeant.
Assist in the issue of property to the various wards and departments, and consolidating the weekly issues of expendable supplies.
Replenishing all chests and hospital corps pouches or belts when needed.
See that all doors to storerooms are locked before leaving at night.
Assist in the issue of medicines to the dispensary.

Receiving Office

The following were the detailed duties of the enlisted personnel in the receiving office.

The senior sergeant was charged with the following:

Disposition of patients returned to duty for the day, providing for transportation to their different camps and organizations by ambulances furnished by Ambulance Cos. 1 and 3.

Admission of patients to hospital from all sources, filling out Forms 55*a* and 55*e*, Medical Department.

Collection of patients requiring railway transport and forwarding of a memorandum to the record office where patients were then given an order on the depot quartermaster for their transportation.

Keeping up a blotter showing names of all patients admitted during the day, their register numbers, name, rank, organization, age, service, nativity, etc., nearest relative and home address, and ward to which assigned.

Service at sick call.

Preparation of index cards for patients sick in hospital, giving name and ward to which assigned, register number and organization.

Assistance to the receiving officer in caring for emergency cases admitted.

Private, first class————(who was also the wardmaster of a small adjacent ward) was assistant to the sergeant at the record desk in admitting patients, in making out cards for the index of patients, and in assigning patients acting as orderlies.

Requisitions for supplies needed in office.

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Filled out a form stating: "Militia going to duty." "Regulars going to duty." "Total sent to duty." "Total admitted from 7 : 00 A.M. to 6 : 00 P.M." Report was made daily, of the number of vacant beds in each ward, for the information of chief of the medical service.

Another private, first class, assisted in keeping up the index file which included all patients sick in hospital and quarters. He also made a record of changes from one ward to the other on the patient's index card, and eliminated from the file, cards of all patients returned to duty.

Visited each ward twice every day and determined number of vacant beds in ward at 7 :30 A.M. and 3 :30 P.M.

Alternated in telephone service when others were at meals, etc.

A private had charge of the ambulance register, which indicated time of leaving and returning and saw that drivers marked out on the ambulance register by tag and taking down same on returning.

He had charge of patients acting as orderlies, and each day made out a roster dropping those who had been returned to duty and adding new ones assigned to this duty by the record office.

He took care of the officer of the day's room and performed general policing of the receiving office and ward.

HOSPITAL REGULATIONS

All officers on duty in the hospital will familiarize themselves with the regulations, orders and circulars governing not only their own departments, but the general administration of this hospital. They will note such orders as may be issued for their information, guidance or control, and will carry them out in so far as they may concern the department or wards of which they have charge.

THE ADJUTANT

Under direction of the commanding officer, the adjutant will have charge of the correspondence and various rosters of service; he will publish and verify all orders and details; keep the records of the hospital; and perform such other duties as may be required.

He will keep accurate rosters of all officers, enlisted men, Army Nurse Corps (female), and civilian employees, assigned by the commanding officer to the performance of the various services, and promptly notify them of their assignment or of changes therein. Whenever the condition of a patient in the hospital becomes critical, it shall be his duty to notify the nearest relative or friend.

He, or a designated commissioned assistant, will perform the duties of ordnance officer, recruiting officer, commanding officer detachment of Medical Department, and of the detachment of patients. The schools, printing office, registration, and baggage room, are under his immediate control.

The adjutant should be courteous to and on friendly terms with the officers of the command he represents, and will avoid all discussions of the orders, or the military conduct of his superiors. He will inform himself on all points of military usage and etiquette, and on proper occasions, aid, with his advice, the junior officers of the command. He will endeavor at

See Appendix II—276a.

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all times to exert the influence belonging to his station, in sustaining the reputation, discipline and harmony of the command.

THE REGISTRAR

The registrar will have charge of all medical and surgical records, and will see that careful and accurate histories and sick and wounded records are kept; and that the sick and wounded report, reports of death, and other reports pertaining to his department are prepared.

When an insane patient is admitted, the registrar will write to the nearest relative for such information as may be of assistance to the ward surgeon; and also, for a statement as to the disposition the relatives desire to have made of the case.

Upon the admission of each patient, search will be made for records of former admissions; in the event of previous admissions, all histories in the case will be sent to the ward surgeon for his information; he will note the fact of previous admission on the current history of the case, and return the previous histories to the registrar's office.

When a patient is returned to duty or transferred, the company commander will be notified by telephone if the organization is in the vicinity of the hospital; otherwise, by notification card, unless a service record has been furnished. If, however, the sickness comes under the provision of G.O. 31 or 45, a notification card enclosed in an envelope will always be sent.

In all cases where it is probable that the disability existed prior to enlistment, and where the action of a disability board is indicated, he will write to the surgeon at the depot where the patient was enlisted, stating the disability, and requesting to be furnished with any data noted on the record of the physical entrance examination in the case. He will obtain evidence in cases submitted for the action of the disability board, and in other cases when necessary; and will prepare all papers necessary to effect the discharge of patients under General Orders, War Department.

A list of all cases under treatment for three months will be kept for the information of the commanding officer. The registrar will ascertain, from ward surgeons, the prognosis in these cases and the probable length of time they will remain under treatment, and make report to the commanding officer. He will ascertain whether or not reports of all cases under treatment for three months have been prepared for submission to the department surgeon.

RECRUITING OFFICER

A commissioned officer will act as recruiting officer, and will make such enlistments as may be authorized by proper authority.

A noncommissioned officer of the Medical Department will prepare enlistment papers and other official documents pertaining to that office.

SUMMARY COURT

One medical officer, in addition to his regular duties, will act as summary court officer, for this base hospital.

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SANITARY INSPECTOR

One medical officer, in addition to his regular duties, will act as sanitary inspector. The duties of this office are prescribed in Army Regulations.

THE SUPPLY OFFICER

The supply officer will be in charge of the quartermaster and medical property, supplies and funds, the repair of buildings and property, transportation, subsistence and laundry. He will be responsible to the commanding officer for the proper care, condition and use of all property, and for the general efficiency of his department.

The property necessary to equip the different departments of the hospital will be issued on memorandum receipts to the responsible officers, who will check property at least once each month and upon transfer of departments, in order to determine and adjust discrepancies, shortages, damages or excesses, and ascertain the responsibility for loss or damaged condition of such property, and to report same to the accountable officer.

He will make routine issues of regular supplies upon presentation of proper requisitions. He will refer to the commanding officer for his approval requisitions for special articles and will note his recommendations thereon. He will fill emergency requisitions and make report to the adjutant's office.

Requisitions prepared on the approved forms, for one week's supply of medical property will be submitted to the property officer each Wednesday, before 2:00 P.M. Issues will be made Thursdays of each week at 1:00 P.M. from the property storeroom. Supplies issued to wardmasters must be signed for by them at this time and place. Issue slips will be signed by the property officer before issues are made. When corn brooms, mop handles or scrub brushes are required, an unserviceable article of the kind must be turned in to replace each one drawn. All unserviceable property will be exchanged or turned in.

Property which is not needed for immediate use will be turned in. Supplies required for at other times than the one set for regular issue will be submitted as emergency issues, and a brief statement given by the officer requiring for same as to the necessity therefor. Articles not on the supply table, and not ordinarily kept in stock, will be called for on a separate requisition blank, with a statement of the necessity for the article. This will be referred to the commanding officer, by the property officer, for his action. Property issued to the several departments of the hospital will be receipted for to the property officer by the officer in charge of such department. Property will not be taken from one department to another without a formal transfer being made through the property office.

Clinical thermometers will be issued on nonexpendable property slips. A record of clinical thermometers will be kept, by register number, in each ward. In the event of one being broken, that fact will be submitted to the adjutant's office, together with the register number of the broken thermometer, in order that the responsibility for the loss may be properly fixed.

See Appendix II—278a.

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The property office will be open from 8:00 A.M. to 12:00 M. and from 1:00 to 4:30 P.M. daily, except Sundays and holidays, when it may be closed at noon.

The sergeant in charge is responsible for the care and protection of all property in the storehouse, for the making of all records and reports, for the performance of their duties by the men detailed to the office, and for the police of the storehouses and their immediate vicinity. He will, by frequent inspections, inform himself of the condition and quantity of articles in stock and will promptly notify the property officer of actual or probable shortage, so that timely requisitions may be made.

On receipt of property, it will be carefully checked with the packer's list and shortage or breakage promptly reported to the property officer. Original packages will be opened, if required, or recorded and placed in the storeroom. Supplies received in bulk will be put in suitable containers and labeled before issue.

All property in the storeroom will be arranged according to the supply table, or in case of additional articles, alphabetically.

Linen and other non-expendable property of no salable value will be submitted for the action of a surveying officer as frequently as practicable, in order to avoid a large accumulation.

Liabilities for open market purchases and repairs will be incurred only upon the written authority of the commanding officer. Orders for purchases will be made in duplicate, signed by the property officer, and one copy retained in the office.

Articles made at the post from medical department materials, such as furniture, aprons, gowns, etc., will be taken up and issued like other property. All articles not marked "Medical Department" will be stamped or branded, as far as practicable, before issue.

Articles procured for special departments, or special articles of more general use, will be issued immediately after receipt, in quantities approved by the property officer, and without further request.

Surplus and unserviceable property will be turned in from the various departments on the regular slips (Form 16c) signed by the responsible officer, a duplicate of which will be returned to him and will constitute his credit memorandum receipt.

Unserviceable articles will, if practicable, be repaired by the property office force. Repaired articles will be returned to the department from which they came, and will be retained in use until worn out.

Unusual breakage and damage, manifestly not due to fair wear and tear, will be reported to the property officer. Wholly unserviceable property will be placed in the proper storeroom, labeled and arranged for inspection and condemnation. Every effort will be made by frequent inspections of wards and other departments, to prevent the accumulation of unserviceable articles or undue quantities of serviceable ones.

Articles from the following list of expendable property may be asked for regularly on Thursdays in quantities sufficient for one week. Any

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emergency demanding the issue of any of these articles on any day other than Thursday, will be investigated by the officer signing the slip, and he will state on the slip why an adequate supply is not on hand:

Aqua ammonia
Insect powder
Liquor cresolis comp.
Oil turpentine
Blank books, large
Blank books, small
Elastic bands
Envelopes, all kinds
Erasers, rubber
Ink, black
Ink, carmine
Mucilage
Pads, letter
Crutches, rubber tips for
Cups, feeding
Cups, spit, paper
Floor dressing
Gauze, plain
Lye, concentrated
Medicine droppers
Medicine glasses
Mop handles
Paper, toilet
Paper, wrapping, all kinds
Pencils, hair
Pins, common
Cotton, bats
Plaster, adhesive
Pads, prescription
Paper, blotting
Paper fasteners
Paper, writing, all kinds
Pencils, lead
Penholders
Pens, steel
Bandages, gauze, roller
Bandages, suspensory
Brooms
Brushes, hand, scrub
Brushes, scrubbing
Cotton, absorbent
Rubber sheeting
Soap, common
Soap, ivory
Soap, scouring
Syringes, penis, glass
Stove blacking
Tape, cotton
Thermometers, clinical
Thread, all kinds
Tubing, glass
Tumblers, glass
Twine, fine and coarse
Bed casters

Officers in charge of wards and other departments will require, both by their personal attention as well as by proper supervision and instruction given to all subordinates under them, economical and proper expenditures. They will also see that sufficient quantities are asked for to last one week, but will not accumulate a surplus.

So far as practicable, other expendable supplies will be issued and non-expendable property will be issued, turned in and exchanged on this day.

All the foregoing transactions will be made on the regular slips, initialed by the property officer, completed with all signatures and filed in the property office. The duplicate half of the non-expendable slip (Form 16*b*) is returned to the place where it originated, and constitutes the officer's debit memorandum receipt.

In emergencies, property is issued by order of the officer of the day, and issue slips therefor will be prepared as soon as practicable.

The issue of crude carbolic acid is prohibited, and phenol will be issued only to operating pavilion, eye clinic, laboratory and dressing rooms.

Liquor cresolis compound only will be issued to wards for disinfecting purposes.

With a few common exceptions, drugs in original packages will not be issued to the wards.

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The permanent records kept will be the following:

Non-expendable Property Files.—A card will be kept for each article, showing the number in use and where, the number serviceable in the storeroom, the number unserviceable in storeroom, and the accountability. On the reverse will appear the number received and disposed of from time to time, the manner thereof and the date.

Receipts.—A complete set of memorandum receipts, duplicates of those in the hands of the responsible officers and covering all property not in storeroom, will be maintained. New receipts will, ordinarily, be made out every six months; also whenever the property responsibility of a department changes.

Expendable Property File.—A card will be kept for each article, with the issues and date noted thereon, and a balance struck after each entry so that the amount on hand at any time will be apparent. As the cards are filled, they will be transfered to a dead file and preserved.

Record book, showing all property received, with date, source.

Property return, as required by the Manual for the Medical Department.

Retained copies of all requisitions.

Retained packer's lists.

Original packages: Record of all such, with source and date.

Issue slips: A file of completed issue slips, exchange slips and turned-in slips.

The following reports will be made:

Vouchers for all open-market purchases, in duplicate.

Quarterly: Regular special requisitions for all supplies; prepared in two sections.

Quantities to be called for will be indicated by the property officer.

Requisitions will be made in quadruplicate: three copies for the commanding officer; one copy to be retained.

Occasional: (1) Special requisitions for such supplies as typewriter ribbons, clinical thermometers, vaccine virus, typhoid prophylactic, and others designated, will be made in the same manner as quarterly requisitions, except that they will be prepared in letter form. (2) Property return will be rendered when a complete transfer of property is made. (3) Inventory and inspection reports, survey reports, and reports of sale of condemned property will be made as required by the Manual for the Medical Department.

A sufficient quantity of materials and medicines should be kept on hand at all times to meet any emergency.

A special report will be submitted to the commanding officer when request is made for an article which cannot be supplied from the medical storeroom.

The stock of alcohol, alcoholic liquors, opium and the salts, derivatives and preparations of opium or coca leaves will be kept in a locked closet in the storeroom and only issued to the dispensary in unit containers from time to time, as may be necessary, upon the written order of a medical officer.

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In the storeroom, receipts and expenditures of these articles will be accounted for in the manner prescribed for the dispensary.

MEDICAL PROPERTY

All medical property in use in the various departments of this hospital will be receipted for by the officers in charge of these departments, on memorandum receipts furnished by the accountable officer.

Medical property will be issued or accepted for exchange or credit only on the order of the responsible officer, which order will be prepared on the authorized blank forms in accordance with instructions printed thereon.

An officer, on assuming charge of a ward or department, will personally check all non-expendable property in the same, and within three days from date of assuming charge, will report to the adjutant that he has complied with this requirement. He will also inform the accountable officer, at this time, of all discrepancies found. The statement to the accountable officer will be in writing, and will show all shortages as well as all property not accounted for on the retained memorandum receipt. After all discrepancies have been properly adjusted, the responsible officer will furnish the accountable officer a memorandum receipt. One copy of this receipt will be filed in the ward or department; this copy being intended for use as the property list of the ward or department to which it pertains. No notations or alterations will be made on it without the authority and consent of both the accountable and responsible officers. New memorandum receipts will be prepared by the accountable officer.

Upon being relieved from charge of a ward or department, the officer in charge of it will secure the return of his memorandum receipt from the accountable officer after all discrepancies have been adjusted and his successor's receipt furnished to the accountable officer.

If a ward or department is to be closed, the officer in charge will cause all property to be checked by the wardmaster or other enlisted attendant, in company with a representative of the accountable officer; should the check show all property as accounted for, the key will be turned over to the accountable officer and memorandum receipt for the property returned to the responsible officer concerned.

All officers are enjoined to see that every precaution is taken to prevent loss and that the property is properly and economically used. All losses or shortages will be promptly reported; and all surplus, damaged or unserviceable articles will be promptly turned in.

Wardmasters and other enlisted men who, under the supervision of the officer in charge of their respective wards or departments, are charged with the care of the property will be held responsible for its care and use. They will check all property in their wards or departments at least twice each month, and report to the responsible officer all discrepancies found. Upon relief from duty, they will check all property with their successors.

In addition to the semi-monthly checking of property, wardmasters and

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other enlisted men, charged with care of property in their respective wards or departments, will make a daily check of the electric light bulbs therein; when responsibility is divided between men on duty during the day and those on duty during the night, this check will be made upon assuming charge in the morning and evening. Any discrepancy will be reported to the responsible officer, who will submit a statement of same to the adjutant for the action of the commanding officer.

SUBSISTENCE

Diets will be served as called for upon slips signed by the ward surgeons. The hours for serving diets to the wards will be 6:00 and 11:00 A.M. and 4:00 P.M.

Wardmasters will see that the diets are called for promptly at the above hours and that trays and dishes are returned as soon as possible to the kitchens after the patient or patients are served.

Patients will be escorted to the mess hall by their wardmasters or assistants and accounted for and turned over to the mess attendants.

Patients requiring special diet in the mess hall will likewise be escorted there by their wardmasters or assistant wardmasters. One of them, however, will be present in their wards during the serving of the diets and be responsible for the proper disposition of same. Any changes in diets during the day will be reported promptly to the proper mess sergeant. Each mess will be under the supervision of a noncommissioned officer who will be responsible for the police of same, the discipline of those on duty therein, the keeping of records pertaining to it, and the proper expenditure of the food.

The subsistence officer will be notified by the sick and wounded department when a civilian employee is about to be returned to duty.

Under the direction of the commanding officer, ward surgeons may prescribe such light police duty in and about the hospital, for convalescent patients, as may not be injurious to their health.

The subsistence officer will have charge of and be responsible for the administration of all that pertains to subsistence of hospital personnel and patients, except the officers' mess.

He will personally purchase such food supplies as are required, and will see that such supplies are properly received, recorded and accounted for.

He will be held responsible for the selection, care, preparation and serving of food in the dining rooms, and from the diet kitchens.

He will see that the equipment for handling the food is sufficient, clean and properly cared for.

He is the custodian of the hospital fund, and he will make all collections and pay all accounts pertaining thereto.

At the end of the month, or at such time as may be directed, he will submit the following records, relating to the messes, to the commanding officer for his inspection:

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Daily order book	Inventory book
Daily purchase book	Bills payable
Issue slips	Bills receivable
Sales slips	Monthly statement of cost
Stock cards	Unpaid hospital charges of patients

The mess sergeant supervises the main full diet messes, cooking and serving of food, cleanliness of the kitchen, mess halls, etc., and maintains discipline.

He will not order any articles from a dealer for any mess, but will prepare a daily list of articles needed for the various messes and for "sales," and will submit same to the mess officer for his approval and orders.

He will see that articles required by the dietists or chief nurse are issued, and that orders for those not on hand are submitted to the mess officer.

He will keep the following records:

(*a*) *Daily Order Books.*—Food supplies required and recorded daily herein, and purchases made personally by the mess officer.

(*b*) *Purchase Book.*—Bills from the various firms, after the articles and their receipts and the amounts have been checked and verified, are posted daily; the storekeeper, butcher, or person properly authorized for each mess, signs his name opposite each article received; a consolidated account of all the daily purchases from each firm is shown at the end of each month. The total daily income and expenditures are recorded herein, showing the daily financial condition of the mess.

(*c*) *Issue Slips.*—Food supplies issued to the various messes are recorded daily with an itemized list and their total value; a duplicate copy is furnished the full diet mess, the diet kitchen respectively.

(*d*) *General Mess Fund.*—This fund accrues from commutation of rations, detachment of Medical Department, civilian employees, commutation of rations of patients at 40 cents per day, and Army Nurse Corps and Reserve Nurses at 40 cents per day, and from the Hospital Exchange dividend. The sources of income will be noted separately.

It is expended in buying food and delicacies for the general and nurses' mess and diet kitchens of the enlisted personnel and such individuals as may be admitted by the commanding officer.

Such gratuities are paid from it as the commanding officer may decide. This fund is kept separate from all others, and utilized only for the benefit of the general mess and diet kitchens. A daily statement of this fund is kept, showing daily income and expenditures.

The "mess" is divided as follows:

General messes, nurses' messes, diet kitchens.

(*a*) *General Mess.*—Conducted for the patients on full diet and for the personnel, the latter consisting of Medical Department detachment and nurses.

(*b*) *The Chief Cook.*—Supervises the cooking and serving of meals to wards and mess hall, and policing of the kitchen proper. He prepares a daily list of articles needed in the kitchen.

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(*c*) *The Assistant Cooks.*—Prepare the meals as directed, and are usually detailed to do such part of the cooking in which they appear to be most proficient. One cook usually attends to the cooking of supper and breakfast, under the supervision of the chief cook or mess sergeant.

(*d*) *The Night Cook.*—Prepares lunch for the night men, the lunch consisting of such articles as steak, bacon and eggs, liver and bacon, chops, etc., served with fried potatoes, bread and butter, coffee, and such fruit and vegetables as may have been left over from dinner or supper. He is required to assist in the preparation of breakfast whenever the preparation of that meal cannot be handled by one man (hot cakes, hamburger steaks, etc.). He is at all times under instructions, and is given an opportunity to qualify as cook.

Diet Kitchen.—The dietist supervises the cooking and serving of meals to wards. She issues supplies prescribed by the ward surgeons, and prepares the daily bills of fare for liquid, semi-solid, light and special diets. The cooking is done under her supervision, by cooks, assisted by a cook belonging to the Medical Department.

She keeps the "diet kitchen book," in which she records all supplies received (checking the same against the issue slips from the storeroom), all the various diets sent to the wards and money valuation of same, all the special articles ordered by the ward surgeons, and the daily bill of fare.

The following articles will constitute the diets of this hospital. No article will be added to this list without first being approved by the commanding officer, and no article will be given a patient, which is not in the diet ordered by the ward surgeon.

LIQUID DIET

Beef tea, beef juice
Broths and soups, strained
Milk, buttermilk, malted milk
Koumyss, kephir
Egg albumen
Egg albumen with lemonade
Wine whey, lemon whey
Orangeade, lemonade
Tea, coffee

LIGHT DIET

In addition to the articles in the liquid diet:

Cereals
Rice, boiled or creamed
Hominy, boiled
Broths and soups
Potatoes, baked, mashed, boiled or creamed
Vegetables in season, except corn and cabbage
Chicken, baked, creamed or broiled
Fresh fish, boiled, broiled or baked
Oysters, raw, stewed, creamed
Sweet breads
Scraped beef sandwiches
Eggs, shirred, omelet
Bread and butter, crackers, toast
Sponge cake
Puddings, corn starch, bread, rice, tapioca and farina
Tapioca, blanc mange
Ice cream, plain, sherbets
Cocoa, chocolate

Fresh or cooked fruits, and plain salads, with consent of ward surgeon.

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Roast beef, steaks or chops to be added when ordered by ward surgeon. Eggnogs only on special order.

The following are typical diets:

LIGHT DIETS

Breakfast	Dinner	Supper
Monday: Fruit (raw), post toasties, scrambled eggs, bread, butter, coffee.	Potato soup, mashed potatoes, creamed peas, chocolate pudding, bread, butter, tea.	Potatoes, mashed, brown, tomato omelet, apple sauce, bread, butter, tea.
Tuesday: Fruit (raw), oatmeal, soft-boiled eggs, bread, butter, coffee.	Cream of tomato soup, mashed potatoes, string beans (creamed), bread pudding, sauce, bread, butter, cocoa.	Creamed potatoes, boiled rice, stewed peaches, bread, butter, iced tea.
Wednesday: Fruit (raw), puffed rice, bacon, bread, butter, coffee.	Vegetable soup, boiled potatoes, stewed chicken, gravy, spinach, tapioca pudding (lemon), bread, butter, coffee.	Escalloped potatoes, Spanish rice, oyster stew, bread, butter, prunes, cocoa.
Thursday: Fruit (raw), cream of wheat, chipped beef (creamed), bread, butter, coffee.	Cream of celery soup, mashed potatoes, creamed tomatoes, lima beans, corn starch pudding, bread, butter, hot tea.	Creamed potatoes, spaghetti (Italienne), white cake, canned peas, bread, butter, iced tea.
Friday: Fruit (raw), shredded wheat, bacon, bread, coffee, butter.	Tomato and rice soups, boiled potatoes, baked fish, creamed fish, peas, chocolate pudding, bread, butter, hot tea.	Escalloped potatoes, creamed asparagus, bread, butter, apple sauce, cocoa.
Saturday: Fruit (raw), post toasties, soft-boiled eggs, bread, butter, coffee.	Vermicelli soup, mashed potatoes, creamed corn, tapioca pudding, bread, butter, cocoa.	Spaghetti and cheese, boiled rice, oyster stew, sliced pineapple, bread, butter, tea, hot.
Sunday: Fruit (raw), cream of wheat, bacon, bread, butter, coffee.	Vegetable soup, mashed potatoes, roast chicken, gravy, bread, butter, ice cream, coffee.	Potatoes, creamed, salmon, creamed, bread, butter, cake, peaches, cocoa.

Superseded.

See Appendix II—286a.

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SPECIAL DIETS

Breakfast	Dinner	Supper
Monday: Fruit (raw), post toasties, scrambled eggs, buttered toast, coffee.	Potato soup, mashed potatoes, beef steak, creamed peas, chocolate pudding, baked apples, lettuce, mayonnaise dressing, buttered toast, hot tea.	Brown mashed potatoes, tomato omelet, buttered toast, jam, apple sauce, graham crackers, iced tea.
Tuesday: Fruit (raw), oatmeal, soft-boiled eggs, buttered toast, coffee.	Cream of tomato, chicken, gravy, mashed potatoes, string beans, lettuce, egg salad, buttered toast, custard, cocoa.	Creamed potatoes, boiled rice, beef steak, stewed peaches, buttered toast, tea.
Wednesday: Fruit (raw), puffed rice, bacon, buttered toast, coffee.	Vegetable soup, boiled potatoes, stewed chicken, gravy, spinach, boiled eggs, celery, baked apple, tapioca pudding, buttered toast, coffee.	Escalloped potatoes, Spanish rice, oyster stew, buttered toast, prunes, cocoa.
Thursday: Fruit, cream of wheat, creamed chipped beef, buttered toast, coffee.	Cream of celery, baked potatoes, beef steak, creamed tomatoes, lima beans, lettuce, jello, Mayonnaise dressing, baked apples, corn starch pudding, buttered toast, hot tea.	Creamed potatoes, sphagetti, white cake and chocolate filling, canned pears, buttered toast, ice tea.
Friday: Fruit (raw), shredded wheat, bacon, buttered toast, coffee.	Tomato and rice soup, baked fish, boiled potatoes, creamed peas, jellied tomatoes on lettuce, baked apples, chocolate pudding, buttered toast, hot tea.	Escalloped potatoes, egg omelet, buttered toast, apple sauce, cocoa.
Saturday: Fruit, post toasties, soft-boiled eggs, buttered toast, coffee.	Vermicelli, mashed potatoes, creamed corn, sliced tomatoes, mayonnaise, baked apples, tapioca pudding, buttered toast, cocoa.	Spaghetti and cheese, boiled rice, oyster stew, sliced pineapple, graham crackers, buttered toast, hot tea.
Sunday: Fruit (raw), cream of wheat, bacon, buttered toast, coffee.	Vegetable soup, mashed potatoes, roast chicken, gravy, spinach, boiled egg, lettuce and apple salad, buttered toast, apple pie a-la-mode, coffee.	Potatoes creamed, beef steak, toast, canned peaches, cocoanut cake, butter, cocoa.

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FULL DIETS

Breakfast	Dinner	Supper
Monday: Corn flakes, milk, hash, Russian style, buttered toast, bread, coffee.	Vegetable soup, boiled cabbage, boiled frankfurters, boiled potatoes, corn bread and syrup, bread.	Chili-con-carne, baked potatoes, ginger bread, bread, cocoa.
Tuesday: Fruit, oatmeal and milk, beef fritters, brown gravy, bread, coffee.	Vegetable soup, baked beans, sliced onions and pickles, corn bread and syrup, bread, tea.	Beef pot pie, dumplings, baked sweet potatoes, ginger bread, bread, cocoa.
Wednesday: Corn flakes, milk, hot buns and syrup, apple sauce, bread, butter, coffee.	Vegetable soup, New England dinner, bread dressing, baked potatoes, brown gravy, bread.	Beef Spanish, candied sweet potatoes, brown gravy, bread, tea.
Thursday: Fruit, corn flakes, bologna sausage, fried potatoes, brown gravy, bread, water.	Vegetable soup, beef loaf, lima beans, brown gravy, bread.	Macaroni and cheese, baked potatoes, lima beans (left over), chocolate pudding, bread, hot tea.
Friday: Cereal and milk, creamed beef, buttered toast, bread, coffee.	Vegetable soup, beef a la Espanole, creamed lima beans, bread dressing, bread.	Macaroni and cheese, baked potatoes, gravy, stewed prunes, bread, tea.
Saturday: Corn meal, milk, German fried potatoes, hot biscuits, bread, butter.	Vegetable soup, baked beans, sliced onions and pickles, bread, coffee.	Beef loaf, mashed potatoes, brown gravy, bread pudding, bread, tea.
Sunday: Bananas, oatmeal, milk, hamburger steak, fried potatoes, brown gravy, bread, coffee.	Tomato soup, beef steak covered with onions, mashed potatoes, lima beans, brown gravy, mince pie, bread.	Bologna sausage, baked sweet potatoes, lemon cake, bread, hot tea.

OFFICER'S MESS

The officer's mess will be maintained for officers sick in hospital. Medical officers on duty at this hospital whose duties prevent their messing elsewhere may be served in this mess at $1.00 per day.

This mess will render a separate fund statement monthly to the department surgeon and will be under the supervision of the mess officer, who will be the custodian of the fund.

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The nurse's mess is conducted by the chief nurse. A daily account book is kept showing the financial condition. She will keep separate records of articles issued from the general mess storeroom and purchases from the open market not through the general mess. She will submit her account monthly to the commanding officer for inspection.

LAUNDRY

Laundry hampers in the various wards will be used for storage of soiled linen, and for carrying same to the linen room. Clean linen will not be put in these hampers for return to the wards.

Soiled linen will be listed by the wardmaster and taken to the linen room for exchange from 6:15 to 8:00 A.M. daily. Wardmasters or assistants will attend to this exchange and not delegate the work to patients.

An accurate account of all linen will be kept at all times. It will be balanced and verified daily.

POLICE OF HOSPITAL

The adjutant will be responsible for the interior police of the hospital. He will require the men on duty in the various departments to make a thorough police each morning, and to keep their departments in a cleanly condition at all times, and will make frequent inspections to see that these instructions are complied with.

The interior police of all buildings (except as hereinafter specified), porches and corridors pertaining thereto, and an area extending 6 feet out from each building (in all directions), will be under the care of the man in charge of the building.

All territory within the hospital reservation will be thoroughly policed each morning before 9 :00 o'clock, and maintained in this condition throughout the day.

All woodwork and windows on both sides of porches and corridors, will be kept clean and orderly byh te man in charge in each case.

The areas between and in rear of wards will be thoroughly policed by the wardmaster, who will be responsible for the area from a point midway between his ward and the building on the other side.

The first sergeant of the Medical Department detachment will act as assistant to the adjutant, as police officer.

The supply officer will be responsible for the outside police of the hospital and a n.c.o. will be placed in charge.

The police of the grounds, the police of the various shops and warehouses (both medical and quartermaster), the cutting and watering of all grass, and the general police of all grounds and reservation limits, together with the collection and destruction of all wastes, garbage, etc., will be considered as outside police and will be made the charge of the n.c.o. in charge of police.

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COMMANDING OFFICER DETACHMENT OF MEDICAL DEPARTMENT

The detachment commander will have command of the Medical Department personnel of the hospital, supplying such details, temporary or permanent, to the different departments of the hospital as may be directed by the commanding officer. He will be responsible for the discipline, instruction, equipment, rationing, quartering, records and accounts of all members of his detachment. He may be relieved by the commanding officer, of the supervision of such members of his detachment, permanently detailed to other departments of the hospital, as the latter may decide.

REGULATIONS FOR THE DETACHMENT MEDICAL DEPARTMENT

1. All men on duty in the kitchen and mess hall will rise at least one hour before reveille. All other members of the detachment (unless specially excused) will rise at first call for reveille. Immediately after reveille each man will neatly fold his bedding, each article separately, and pile it at the head of his bunk, beneath the pillow. Beds will not be made down before 8:30 P.M. except in case of sickness or other necessity. All clean underclothing will be neatly folded and placed in the lockers, all other clothing will be brushed and hung in the wall locker or in another specially designated place. Soiled clothes will be kept in the barrack bag hung at the head of the bunk. Shoes will be polished and placed on the floor at the sides of the bunk.

2. Immediately after breakfast the hospital will be thoroughly policed in every department. It must be ready for inspection at 9:00 A.M. and always kept absolutely clean. Water will not be used on the floors without special permission.

3. All men will pay the utmost attention to personal cleanliness. Each will bathe at least once weekly, will keep his hair short and his face shaved or beard neatly trimmed.

4. Breakfast will be served fifteen minutes after reveille. Dinner at 12:00 M. Supper at 5:00 P.M. All men will repair promptly to the mess room at the appointed time in proper dress.

5. The name of each soldier will be attached to his bunk and his detachment number will be placed upon his accoutrements. These latter will be hung, neatly and uniformly arranged on the foot end iron of his bunk.

6. All bunks will be overhauled each week, and weather permitting, the bedding and mattresses together with the outer clothing will be shaken and hung out to the air for at least four hours. Mattress covers will be changed before each monthly inspection, or oftener if necessary. Sheets and pillow cases will be changed at least once each week.

7. All public property in the possession of the men must be kept in good order, and all missing or damaged articles must be reported as soon as lost or damaged.

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8. Members of the detachment will not at any time leave the hospital except by permission from proper authority, or in case of emergency in the execution of duty.

9. No member of the Medical Department detachment will absent himself from his place of duty until his services there are no longer required or unless relieved by proper authority.

10. The property sergeant will keep an accurate account of all property and its place of distribution. Each man in charge of a department of the hospital, as wardmaster, cook, etc., is responsible for the public property used in his department; he will receipt for the same and by trimonthly inventories assure himself of its presence and condition.

11. The supervision of cooking and messing is of the utmost importance. The kitchen is placed under the immediate charge of a noncommissioned officer who is held responsible for its condition and for the proper use of the rations. The greatest care will be observed in cleaning cooking utensils, crockery, etc. No one is allowed to visit or remain in the kitchen, except those who go there on duty, or are employed therein.

12. The diet tables of this hospital will be those set forth above. The instruction in the art of cooking given in the Manual for Army Cooks will be observed as far as practicable.

13. All lamps in use must be cleaned, filled, and made ready for lighting before the morning inspection. The filling of lamps after dark is positively prohibited.

14. All men on duty with this detachment must treat patients with gentleness and consideration. They will at once report any breach of discipline on the part of the patient.

15. Each noncommissioned officer and man will assist the other men of the detachment in learning everything pertaining to their duties as sanitary soldiers.

16. All noncommissioned officers and privates of the detachment will be present at all formations, unless specially excused. Ordinarily but one noncommissioned officer will be required to attend recitations. No ward will be left without proper attendance.

17. Each enlisted man upon his assignment to a department of the hospital will familiarize himself with the special orders governing it.

18. Attendance upon instructions is obligatory. Failure upon the part of any Medical Department man to make an average of 70 per cent. in the monthly instruction will cause the withholding of all pass privileges in his case, until he has passed a satisfactory examination in the subjects considered during the month. A reëxamination weekly after the end of the month until they qualify will be allowed those privates who have failed in the regular monthly examination.

19. No information regarding the condition or disease of patients under treatment will be given to anyone except those authorized under the Regulations to receive it.

20. The senior noncommissioned officer will see that all men of the

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detachment and all patients in the hospital are always present or accounted for.

21. Officers and noncommissioned officers will be addressed under all circumstances by the title of their rank.

22. Members of the detachment will wear the prescribed uniform at all times when present at the post. While on fatigue they may wear the fatigue dress. While on duty in the wards, dispensary, operating room, mess room or kitchen, they will wear the white uniform.

23. Civilian clothes will not be worn on pass unless special permission is obtained from the commanding officer.

24. All noncommissioned officers will report to the senior noncommissioned officer the status of the work and the immediate wants of the departments of which they are in charge. Noncommissioned instructors will similarly report. Suggestions relating to the welfare of the detachment should be made at this time.

25. Articles of hospital property will be signed for by men in charge of departments when issued; they will be held responsible for their proper care. Transfer of non-expendable property from one room or department to another without proper authority is prohibited.

26. Members of the Medical Department are strictly forbidden to borrow money or valuables from patients. They are also forbidden to play cards or other games with patients.

27. Gambling is strictly prohibited in any part of the hospital buildings or on the hospital grounds. Any noncommissioned officer or wardmaster seeing any patient or member of the Medical Department engaged in gambling within the limits above mentioned will inform such person that he is in arrest by order of the commanding officer, and immediately report the names of the persons so engaged to the senior noncommissioned officer to be reported to the commanding officer.

28. The night watchman shall go on duty at 9 :00 P.M. daily, and remain on duty until relieved at 6 :00 A.M. the following morning. During his tour of duty he will be under the immediate orders of the noncommissioned officer in charge of quarters. He will patrol the hospital grounds at least once every three hours and will be constantly on the alert for fires, unauthorized lights, and unauthorized persons in and about the hospital, immediately reporting all unusual occurrences and violations of existing orders which come under his observation to the noncommissioned officer in charge of quarters.

EMERGENCY LITTER SQUAD

At the sound of the hospital corps call, three times repeated, the two men designated, composing the emergency litter squad, will fall in on the hospital parade near the hospital, equipped with a litter, belts and canteens, the litter being unstrapped and at the carry.

Whenever any member of this squad leaves the vicinity of the hospital he will provide a substitute fully instructed in his duties.

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Men will wash their hands, brush their hair and appear in neat uniforms at their meals. They will bathe twice weekly.

Squad leaders will be held responsible that intoxicating liquors are not introduced into tents.

The uniform of members of this detachment will conform to orders of the district commander.

Men in operating rooms, dressing rooms and dental offices, and cooks will wear white.

Fatigue may be worn by men at appropriate work.

The uniforms will not be mixed and unauthorized articles of civilian clothing will not be worn.

When not on any specific duty, men of excellent character may leave the hospital at will without pass and will be excused from routine roll calls and checks.

When they desire a pass while on duty in the P.M. same may be given by the commanding officer provided circumstances warrant and upon recommendation by the medical officer directly in command of the applicant. A written pass will be required in such cases.

Men of good character will be required to obtain a written pass when leaving the hospital. They will not be given a pass during their tour of duty.

Men of fair or poor character will be given a pass only under exceptional circumstances, each pass will be marked with the letter "C," top center. The bearer will not be permitted to leave the hospital in uniform.

All men who leave the hospital to visit the city will be inspected by a commissioned officer before departure. Particular attention will be paid to the cleanliness of the uniform and its compliance with uniform regulations. Inspection will also consider the soldier's personal cleanliness.

RECEIVING OFFICER

An officer will be on duty in the receiving ward from 8:00 A.M. to 4:00 P.M. daily. His assistants consist of a noncommissioned officer and a suitable number of privates, first class, or privates.

He will admit all patients to the hospital, during his hours, and assign them to proper wards, especial care being taken in the cases of contagious disease, general prisoners, and the insane. General prisoners, unless their condition precludes, and the insane, will be placed in the detention ward. All cases of contagious disease will be sent to the isolation ward. Care will be exercised in determining the exact status of garrison prisoners, and if serving a relatively long sentence, or awaiting trial or result of trial for an offense of gravity, they will be classed with general prisoners in so far as rules concerning their assignment is concerned.

All patients admitted to the hospital will be examined without delay. Such orders, as are immediately necessary, will be given by the receiving officer, unless the patient has been examined and authority for admission granted by another medical officer.

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When patients are admitted, they will be asked, in the receiving office, if they have any money or valuables which they desire to deposit in the safe; if so, they will be directed to turn same over to the receiving officer, who will give them a receipt. Members of the detachment Medical Department will not receive money from patients for any purpose. Valuables received will be turned over to the adjutant, who will deposit them in the hospital safe.

When a patient is admitted to hospital suffering from a contagious disease, other than venereal, the officer admitting the case will immediately make a verbal report to the commanding officer, and notify the chief of service. The latter will, without delay, forward a written report (on blank form provided for that purpose) to the adjutant, giving name, status, station and diagnosis, and will cause the patient's clothing to be disinfected; should the case be discovered in a hospital ward, the ward surgeon will make the report immediately to the chief of service, who will prepare the written report referred to, and cause the necessary disinfection of the ward, bedding, clothing, etc., and take the necessary precaution to prevent the spread of the disease.

When an enlisted man is admitted to this hospital, as a result of a disease or injury in which there is a question as to the line of duty status, the history will be sent to the officer who admitted the case. He will make a signed statement as to the condition of the patient admitted, and any evidence he may have knowledge of pertaining to the case.

The receiving officer is responsible for the proper care of patients from the time of their admission, until he knows that either the chief of service or the proper ward surgeon has assumed charge. In the absence of these, he will make such examinations and give such orders as may be necessary for the time being.

After admission to a ward, the ward surgeon will see the patient as soon as possible, or in his absence the officer of the day. In all cases the wardmaster will notify the ward surgeon at once, of the fact of admission of a patient, and if the case is an emergency, and if the ward surgeon cannot be found, the officer of the day will be notified.

The receiving officer will take sick call for the detachment Medical Department daily at 1:00 P.M.

All patients admitted to this hospital will be inspected at once for the presence of vermin by the receiving officer or in his absence by the officer of the day.

When vermin are found, the necessary steps for disinfection will be taken.

The receiving officer, or in his absence the officer of the day, will exercise due care in assigning patients to the various wards to the end that it will not be necessary to make needless transfers the next morning.

Unconscious or irresponsible patients will be searched and valuables removed by the admitting officer. Such money and valuables will be turned over to the adjutant, who will give the patient a receipt for same when he regains consciousness or responsibility.

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NONCOMMISSIONED OFFICER ASSISTANT TO RECEIVING OFFICER

The noncommissioned officer on duty in the receiving office will be responsible for the attendance of orderlies on duty therein and for their prompt and courteous attention to all telephone calls.

He will check all men going on or returning from pass.

He will check names of men on restriction list, required to report to him for that purpose. He will detain and send to the first sergeant, for disciplinary measures, any Medical Department men found in improper, dirty or incomplete uniform.

He will see that all patients are admitted and discharged from hospital through the receiving office. Upon admission of a patient, he will call the officer of the day, in the absence of the receiving officer, obtain statement of ward to which the case is to be admitted, and send the patient, accompanied by pages 55*a* and 55*f* of the clinical record correctly filled in, to the designated ward. Special care will be exercised to get the correct name, initials, rank and organization of each patient, whether on furlough, detached service, etc., and in case of discharged or retired soldiers, the organization with which they served, and the complete data to appear on every record.

Whenever a patient, accompanied by an attendant, is admitted from an outside station, he will send the attendant to the record office with a copy of his order.

In an emergency, when an officer or soldier is admitted direct, he will notify the adjutant, in order that the surgeon of the command to which the man belongs may be notified. Such cases will be admitted as from the posts at which they are stationed.

When civilians are admitted, the full name and status will be made of record.

Patients for the isolation ward will not be permitted to leave the ambulance but, after having been examined by the officer of the day, or receiving officer, will be sent directly to that ward.

When general prisoners, or insane cases, are admitted, the guard or attendants will conduct them to the detention ward.

Patients admitted to hospital will be conducted to the proper wards by the orderly, who will, in all cases, carry any hand baggage the patient may have.

All patients leaving hospital will report at the receiving office.

All cards filled in, will be initialed in the upper right-hand corner by the person preparing the same, and he will be held responsible for any errors thereon.

Members of the detachment of Medical Department, and patients going on pass, will report at the receiving office. Passes will be left on file in that office. Upon return, they will report at the office, and the time of return will be noted on the pass which will then be returned to the adjutant's office. Should any man on pass fail to return on time, the time of his return

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will be noted on the guard report. Men not in proper uniform, will not be allowed to leave on pass, and the adjutant will be notified in case of patients thus disqualified.

Visitors will be admitted between 2:00 and 4:00 P.M. only, except by permission of the receiving officer. They will be admitted in emergency upon authority of the officer of the day. He will satisfy himself as to the character of visitors, excluding solicitors, peddlers, and other undesirables. When any doubt exists, the adjutant will be consulted. Patients in the venereal wards will not be permitted to receive women visitors in any part of the hospital. Such visitors desiring to see patients will be refused admission. Ward surgeons, wardmasters and attendants of these wards, and all noncommissioned officers and attendants of these wards, and all noncommissioned officers and attendants on duty in the office of the officer of the day will see that the provisions of this order are strictly complied with. Patients found violating this order will be immediately sent to their wards, and a prompt report of the occurrence made to the adjutant.

In case of death, the receiving officer will be notified, a litter sent to the ward to remove the body, and a record of the death entered in the guard report.

From 7:00 P.M. to reveille, the n.c.o. on night duty will make an inspection of the hospital grounds, every two hours, and assure himself of the alertness of all men on night duty. He will make a written report of conditions observed on each round, for the information of the officer of the day, and will have the morning guard report prepared for signature.

Medical Department men detailed on emergency duty, will be utilized whenever a man on regular duty is absent for any reason; if additional men are needed they will be detailed by the first sergeant.

Cooks and attendants desiring to be called at a certain hour, will inform the noncommissioned officer in charge of quarters, and will be awakened at the time requested.

The guard report will be prepared by 7:45 o'clock each morning. The names of all Medical Department men and patients, absent without leave, will be entered, as well as any event out of the ordinary routine, including a record of sounding a fire alarm.

PROFESSIONAL WORK

The professional work of the hospital will be conducted by services, as follows, each of which will be under a chief of service: Medical; Surgical; Eye, Ear, Nose and Throat; Venereal; and Dental. (See note at end of this chapter).

Chiefs of Service.—The chiefs of service will be responsible for the proper administration of their services. They will assign the assistants to their duties, and will arrange for the admission of patients to suitable wards and for their proper care and treatment. They will visit and inspect their wards frequently, and consult with and advise their assistant officers.

The chiefs of the medical and surgical services will keep a roster which will provide on the afternoon of each holiday and Sunday:

See Appendix II—296a.

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(*a*) One medical officer for duty in the infectious section of medical service.

(*b*) One medical officer for duty in the acute medical wards of medical service.

(*c*) One medical officer for duty in the surgical service.

This roster will provide that each medical officer be given one afternoon off duty during the week following their holiday tour.

This roster is not to conflict with officer of the day's roster and is supplementary thereto.

Medical Service.—The medical service will include the general medical wards for enlisted patients, medical cases in officers wards, the isolation wards, the ward for insane patients, and the laboratory.

The senior medical officer assigned to duty in this service will be known as the chief of the medical service. He will maintain a general supervision of it, and is directly responsible to the commanding officer for its efficiency. He will have charge of and give his professional attention to all medical cases in the officers' wards. He will assign his assistants to the several wards and see in consultations all serious cases.

Surgical Service.—The surgical service will comprise the general and special surgical wards, the operating and surgical dressing rooms, and surgical patients in officers' wards.

The senior medical officer detailed for duty on this service will be chief of the service. He will be responsible to the commanding officer for its efficiency. He will ordinarily act as operating surgeon under the direction of the commanding officer, and will have direct charge of and give his professional attention to all surgical cases in the officers' wards.

No medical officer on the operating staff will actively participate in any postmortem.

Two privates, first class, or privates, Medical Department, will be detailed as attendants in each of the operating rooms; one of these attendants will be detailed daily to assist the officer of the day in the care of such minor emergency cases as may be admitted to the hospital during the afternoon or night; the name of the operating room attendant so detailed will be posted on the bulletin board.

Eye, Ear, Nose and Throat Service.—The senior medical officer assigned to duty on the eye, ear, nose and throat service, will be the chief of this service.

This service is maintained for the treatment of both hospital cases and out-patients. Hospital cases will be treated in the special wards. Such cases will be under the immediate professional care of the chief of this service. Operative work in this service may be performed either in the office room of the clinic pertaining to this service or in the general operating room. If in the latter, the chief of the surgical service will be consulted to arrange hours, and for such assistants as may be required.

A clinical record will be made in all cases of officers and enlisted men who receive treatment in this service, which are "carded for record only," for

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such conditions which should, in the interests of either the government or the patient, be made of record.

One private, first class, or private of the Medical Department, will be detailed for duty in this service as clerical assistant.

All official correspondence, etc., will be transmitted through the commanding officer.

Venereal Service.—The venereal service will comprise the venereal wards and dressing room.

The senior medical officer on duty in this service is the chief of the service. He is operating surgeon for venereal cases. He will assign his assistants their duties and will cause patients to be admitted to suitable wards and see that they receive proper care and treatment.

Dental Service.—The senior dental officer on duty will be chief of dental service. He will assume all accountability of property pertaining to the dental office, and will be responsible to the commanding officer for the efficiency of the service. He will make weekly reports, showing the number of patients who will probably be in hospital ten days or longer, with the diagnosis. One or more dental surgeons will, when available, be assigned to duty as assistants.

Dental surgeons will treat all patients entitled to treatment, who may apply to them. Should persons apply in such numbers as to make it impracticable to serve all, officers and enlisted men will receive first consideration, followed next by members of their families and members of the Army Nurse Corps.

Dental cases in hospital will be considered in the surgical service, and will be under the control of the chief of that service.

The official hours for dental surgeons will be from 9:00 A.M. to 12:00 M., and from 2:00 P.M. to 4:00 P.M. On Saturday and Sunday, morning hours only will be required. Dental surgeons will be in their offices during official hours; absences necessary will be reported to the adjutant.

One private, first class, or private of the Medical Department will be detailed as assistant to each dental surgeon on duty.

OFFICER OF THE DAY

The tour of duty will begin at 9:00 A.M. and continue twenty-four hours. During his tour the officer of the day will remain within the limits of the hospital grounds.

From 8:00 A.M. to 4:00 P.M. the duties of the officer of the day, in so far as the admission of patients is concerned, will be assumed by the receiving officer.

The officer of the day will inspect one meal daily, in such a way that in three successive tours he will have inspected all three meals.

No charge will be entered against any patient, except the hospital charges under Army Regulations; and no one will receive payment for services of any character at this hospital.

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The officer of the day will inspect the hospital once after taps each day. On each inspection he will visit all wards and ascertain that the patients are properly cared for and that the attendants are properly performing their duties. He will assure himself that the night guard is properly instructed as to their duties, and will receive any report from the noncommissioned officer in charge of night guard or barracks.

He will see that the instructions of the ward surgeons, regarding patients, are properly carried out; will give emergency treatment; and in all serious emergencies will notify the ward surgeon or chief of service.

Any medicine or property issues required for the care and treatment of a patient admitted after the ward surgeons have left the hospital, will be signed for by the officer of the day.

Great care will be exercised in caring for stoves in wards.

Officers may exchange tours of duty by notifying the adjutant in advance.

At the termination of his tour, the officer of the day will enter in the officer of the day book, a report of any untoward events which may have happened, and any changes in status of patients and members of the detachment of the Medical Department, except those of a routine nature.

When admitting patients to the hospital the officer of the day will inform them that the hospital is not responsible for money or valuables kept in the possession of the patient, and that their money or valuables will be cared for if they so desire.

Gunshot wounds and others which seem to require it, admitted to the hospital, will immediately be given tetanus antitoxin by the officer of the day, unless the case is immediately taken charge of by the surgical service or has already received tetanus antitoxin as shown by his history received.

The officer of the day will exercise due care in assigning patients to the various wards, to the end that it will not be necessary to make needless transfers later.

He will receipt for prisoners admitted to hospital.

When blood counts are necessary after 5:00 P.M. they will be made by the officer of the day. All materials for the count are kept in the laboratory, plainly marked, and are accessible at all times.

WARD SURGEONS

Officers on duty as ward surgeons are responsible for the welfare and discipline of their patients, the conditions of their wards and the proper services of nurses and Medical Department men on duty therein. They will enforce orders from higher authority but will issue no orders affecting routine administration without the approval of higher authority.

They will make two inspections of their wards daily, one before 9:30 A.M. and the other after 3:00 P.M. They will give especial attention to the cleanliness and orderliness of everything in the wards, in the rooms and on the porches pertaining thereto, to cleaning the floors using enough water to accomplish the purpose. If floors cannot be cleaned with mops they will be scrubbed.

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Ward surgeons will inspect the fire-extinguishing apparatus in their wards and see that cylinders that do not bear a label showing they have been charged within six months are refilled.

They will make adequate clinical records of all patients on the forms prescribed.

They will include in the record all laboratory reports, and will note the transfer diagnosis in its apportioned place. They will complete and sign the clinical record, and send the same to the record office with the ward report submitted after the discharge of the patient.

When a patient is ordered to report to the chief of the eye, ear, nose and throat service, the ward surgeon will cause the headings on the blank form "Request For and Report of Examination," to be filled in and sent with the patient; before such a patient is returned to duty, the ward surgeon will send him to the eye, ear, nose and throat clinic, with the blank form cited, in order that the result of treatment may be noted thereon, and the records of the clinic completed.

They will receive from patients money or valuables which these wish to deposit in the hospital safe.

They will report before 9:00 A.M. what patients will be returned to duty the following day.

They will keep a roster of patients able to perform light duty, amending the same daily as required and report before 9:00 A.M. in what capacity such patients can serve.

They will return to duty on Wednesday and Saturday, patients who would require railway transportation in order to rejoin their commands.

They will cause all orders affecting ward administration, including conduct of patients and duties of assigned personnel to be posted conspicuously and will enforce their provisions.

They will report to the record office every infraction of duty on the part of the medical department personnel in their respective wards, within twenty-four hours after its occurrence.

They will cause to be entered daily in the ward books the following notations: date, bed numbers, names of patients, diet, treatment in detail. Upon admission to ward each patient's official designation and Christian name will also be entered, but this need not be carried from day to day unless there be two patients by the same surname in the ward. Night orders will be made of record, either under a separate caption daily, in the ward book or in a separate book for night orders only. In case there are no orders this fact will be recorded. Ward surgeons will inspect and sign their ward books daily and cause these records to be preserved.

TIME SCHEDULE OF WARD WORK

They will follow approximately the following in order:

A.M.
6:00 Clean stoves
Refill coal buckets

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6:30 Temperatures taken
Trays prepared
Water receptacles filled
Commodes emptied
Stoves refilled and cleaned

7:00 Diets served
Dishes washed
Ward mopped and swept
Medicines administered
Swab throats of those requiring this treatment

7:45 Temperatures taken
Beds made
Tables policed
Floor mopped
Ice obtained
Laundry counted
9:00 Eye washes administered
Mouth wash

10:00 Bouillon served
10:30 Treatment administered
11:00 Diets served
Dishes washed
12:00 Milk or beaten eggs, served
P.M.
1:00 Ward swept, water process
1:30 Laundry taken to sterilizer or linen room
2:00 Temperatures taken
2:30 Treatment administered
3:30 Lemonade or oranges served
4:00 Water procured
Diets served
Swab throats of those requiring this treatment
4:30 Treatment administered
5:00 Milk served
5:30 Coal and water obtained
6:00 Commodes emptied
7:00 Medicines administered
8:00 Bouillon served

They will cause to be entered on the daily diet slips the amount of milk needed in the ward for each day. This statement will be a separate entry and will not be supposed to be implied by such entries as "liquid diets," etc.

They will require wardmasters to keep a roster of patients who are able to do certain light duties, this roster will be amended each morning before the surgeon makes rounds. From this roster there will be detailed certain men as messengers, men for light work in diet kitchens, dining rooms, kitchens and other places requiring additional help from time to time as required.

If a death occurs during the hours when the ward surgeon is on duty, he will immediately secure the patient's effects, make a list of them and at the first opportunity turn them in to the adjutant. These consist of personal

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effects, trinkets, letters, jewelry, etc., that have been in the possession of the patient in the ward.

If death occurs at an hour when the ward surgeon is off duty, the officer of the day will perform this duty.

They will personally verify the 4:00 P.M. ward report and initial it.

When patients are transferred from one ward to another, sent to report to an examining board, or ordered to any department of the hospital for examination or treatment, the charts, histories and other papers pertaining to such cases will be brought up to date and turned over to the proper officer by the wardmaster. Under no circumstances will any patient be allowed to handle charts, histories or other ward records. In the case of transfer from one service to another, the proper notation will be made in the clinical record, and the history as sent, will be complete to date.

Whenever a patient is transferred to another post or hospital, the ward surgeon will see that he is provided with proper clothing for the journey, climatic conditions being considered.

Ward surgeons will send the charts of all tuberculous cases recommended for transfer to the Army General Hospital at Fort Bayard, to the chief of service, who will examine the patient; should the patient be found a fit subject for transfer as indicated, the chief of service will submit a statement, in the form of an official letter, setting forth the following data in the case: name, rank and organization; military record; stage and extent of the disease; opinion as to curability; and recommendaton that patient be transferred to Fort Bayard for further treatment; also, he will inclose a medical history of the case, a certificate of diagnosis, and an agreement signed by the patient to the effect that, if discharged, he is willing to remain at Fort Bayard for treatment, as a beneficiary of the Soldier's Home, for a period of three months from date of admission thereto.

1. Ward surgeons will state in their diagnosis, whether the sickness comes under the provisions of G.O. 31, G.O. 45, or is simply "No" or "Yes."

2. All diseases the result of the soldier's own misconduct, contracted *prior* to his current enlistment, do not come under the provisions of either G.O. 31 or G.O. 45, and are simply "NO" (see Bulletin 18, 1915, page 5).

3. All diseases the result of the soldier's own misconduct, contracted during his current enlistment, when the latter began *on or after April*, 27, 1914, come under the provisions of G.O. 45.

4. All diseases the result of the soldier's own misconduct, contracted during his current enlistment, when the latter began *prior to April* 27, 1914, come under the provisions of G.O. 31.

Ward surgeons will notify the officer of the day of any patient requiring special medical attention during the night.

Small incomplete hernias with small ring and definite history and evidence of causative traumatism, subsequent to enlistment in the regular service (muster into Federal service in case of militia) will be recorded as "In line of duty." All others will be recorded as "Not in line of duty."

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In all cases of enteritis or diarrhea, a specimen of stool will be sent to the laboratory before 9:00 A.M. for study, at department laboratory. If fever exists, a blood culture will also be made. Requests for reports from department laboratory will be made in duplicate except requests of Wassermann tests.

Urine, sputum and stool specimens are to be collected and delivered to the laboratory by the night ward attendant prior to his going off duty. This service does not include special or emergency work, which will be accepted at all hours.

Wassermann, tuberculin fixation and gonorrheal fixation tests are made on Mondays and Thursdays. All laboratory slips for these tests should be properly filled out, signed and sent to laboratory before noon of the day test is to be taken. The men from each ward will report at 1:00 P.M. sharp, accompanied by a ward attendant. If a patient is a bed patient the laboratory should be notified by a note attached to the patient's slip marked "Bed Patient." The examination desired should be specified definitely.

Specimens for examination for amœba and blood cultures which are sent to the department laboratory, must be in the hospital laboratory not later than 10:00 A.M. All slips for specimens that are sent to the department laboratory, should always be made in duplicate. Special care should be taken with stool specimens, viz., the containers should be properly sealed and the outside clean.

For the purpose of maintaining records and for the proper handling of specimens all laboratory slips should be properly filled out and signed by the ward surgeon.

In cases where reports are required early in the morning, *e.g.*, cases that are to receive salvarsan or its equivalent, specimens should be sent to the laboratory the preceding day.

The laboratory will be open all night and a laboratory man will be on duty to do emergency work and assist the officer of the day or the night medical officer.

WARDMASTER

Under the ward surgeon the wardmaster is in charge of the ward, assistants, and of the patients in the ward. When he is absent the assistant will act in his stead.

The wardmaster will be responsible for the police of the ward, corridor and grounds adjoining. He will be responsible to the ward surgeon for all property in the ward, and he will make a careful check of the same at least every two weeks. He will draw all articles needed from the medical property office. The storeroom and linen closets will be kept clean, and the property neatly arranged at all times.

The wardmaster, or his assistants, will secure from the kitchen at stated hours, all articles of diet for patients fed in the ward.

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Promptly at meal hours he will form all table-diet patients in line and march them to the mess hall, where they will be formed in a column of twos until such time as the signal for entrance into the building is given.

Patients will not be allowed to go to the mess hall unattended; care will also be exercised to see that special diet patients do not go to the mess hall.

Upon the admission of a patient to hospital the noncommissioned officer in charge of patients property or his assistant will secure his effects other than money and valuables, list them in duplicate on the patient's property card, Form 75, get the patient's signature, showing that the list is correct, if the patient is able to sign, tag them for identification (Form 76) and turn them over to the n.c.o. in charge of the storeroom for patient's effects. If the patient be unable to sign, he will cause some witness to do so, signing both for the patient and himself. Enlisted men will receive no money or valuables from patients.

The wardmaster will sign both lists, retain one of them and return the other one, which will be filed in the adjutant's office. Upon the departure of the patient from the hospital the wardmaster will notify at 4:00 P.M. of the day before, the n.c.o. in charge of quarters, who will obtain the list of the patient's effects from the adjutant's office, take it to the clothing storeroom, get the bundle of clothing, deliver it to the patient (on the day he is to go to duty), get his receipt on the form and return the receipt to the adjutant.

He will get from the dispensary each morning immediately after the visit of the ward surgeon such medicines as the ward surgeon may direct.

He will prepare and submit the daily report of ward at 4:00 o'clock each afternoon.

On the last day of each month, wardmasters will require all patients to remain in or immediately in front of their respective wards until noon, to enable their company commanders to muster them.

The wardmaster will collect the soiled linen each morning and take it to the laundry at the required hour, receiving therefrom clean articles to replace all turned in.

Medical Department men on duty in the hospital will have no financial dealings of any kind with patients. They will not eat any of the food sent to the wards for patients.

Smoking in wards is prohibited, except when specially authorized by the ward surgeon; this applies to members of the detachment of Medical Department, as well as patients.

Patients will not leave the hospital grounds, except by permission.

Immediately upon admission of a patient to a ward, the wardmaster will notify the ward surgeon, if the admission is during office hours; at other hours, the officer of the day will prescribe for the patient.

If the ward surgeon is absent during office hours, the wardmaster will notify the officer of the day, who will then prescribe for the patient.

The wardmaster will accompany to the laboratory all men requiring

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laboratory examination; he will prevent those from whom gonorrheal smears are to be taken from urinating en route.

The wardmaster will admit no visitors to the ward, nor allow any patients to see a visitor without written authority from the adjutant, or in his absence, the officer of the day. Visiting hours are from 2:00 to 4:00 P.M.

When a patient dies the wardmaster will properly prepare the body before sending it to the morgue. He will see that all orifices, such as the mouth, nose, rectum and urethra are plugged with cotton. An identification tag will be attached to the body showing the name, rank, company, regiment, ward number, time and date of death. On the death of a patient the wardmaster will promptly notify the ward surgeon or in his absence the officer of the day and will not remove the body until it has been examined by one of these officers.

No clothing will be obtained from the clothing room without proper authority. Patients going to duty will receive their clothing the day they leave.

The use of serviceable property for cleaning purposes is strictly forbidden. This applies especially to the use of blankets for polishing floors, towels for dusting, scrubbing or washing windows, and sheets placed on tile floors to keep them clean.

Transfer of patients will be reported at once to the receiving office by the wardmasters of both wards concerned. No transfers will be made without the approval of the chiefs of services concerned.

Wardmasters will restrict to their wards patients not on pass, or those going to the toilets or dining room. They will require them to return promptly from the dining room to their wards.

RULES FOR NIGHT NURSES, OTHER THAN THOSE OF THE ARMY NURSE CORPS

The night nurse will report promptly at 6:00 P.M. and relieve the wardmaster, remaining on duty until 6:00 A.M. He will see that all lights in the ward are extinguished promptly at 9:00 P.M. and that all patients are then in bed. He will report any case of emergency to the officer of the day or the senior noncommissioned officer under like regulations as are prescribed for the wardmaster. He will promptly administer such medicines as may have been ordered to be given during his tour of duty. He will call upon the noncommissioned officer in charge of quarters when necessary for information, or instruction, and will make a check of patients at such times as may be required.

ARMY NURSE CORPS

Chief Nurse.—The chief nurse is under the immediate orders of the commanding officer of the hospital. She will have general supervision of the nursing service in all wards in which nurses of the Army Nurse Corps

See Appendix II—305a.

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are on duty, and will be in charge of the nurses' quarters. She will familiarize herself with the Army Regulations and the Manual for the Medical Department in so far as they relate to the Army Nurse Corps, and will instruct the nurses under her supervision in such regulations as refer to them, and in the duties peculiar to Army work.

She will exact the proper performance of their duties, and is responsible for the discipline, among the nurses, both in the wards and in the quarters; and will, at once, report any neglect of duty, serious breach of discipline, or misconduct to the commanding officer.

She will arrange the hours of duty and assignment of all nurses, and will be responsible for the execution of all orders relating thereto.

She is responsible for the comfort and general well-being of the nurses under her, and will promptly report to the commanding officer ary matters which unfavorably affect the same. She will also bring to his attention, at once, any case of illness among the nurses.

When required by the commanding officer, she will supervise the instruction in practical nursing of the Medical Department men on ward duty.

Supervising Night Nurse.—When necessary, the chief nurse will assign a nurse to supervise the nursing service of the hospital at night. Ward nurses on night duty will respect the orders of the supervising night nurse accordingly. They will apply to her for instructions, if they need them, and will inform her, at once, of all emergencies arising in the wards. The supervising night nurse will, on being relieved, report to the chief nurse any unusual incidents of the night's work and any derelictions of duty on the part of the night nurses.

Head Nurse.—The chief nurse will designate one nurse for each ward, to act as its responsible nursing head. This nurse will receive all orders from the ward surgeon relating to the care and treatment of the patients in her ward, and will record the same for the guidance of both day and night nurses. She will be responsible for the proper nursing of the patients, and for the proper serving of the food in the ward.

She is responsible to the chief nurse for the conduct of the ward nurses, and will advise the chief nurse as to their efficiency. Her hours of duty will be the same as those of other nurses, but, ordinarily, she will be required to perform night duty only one month in six.

The head nurse of each ward will requisition all diets, and is authorized to sign the requisition blank for same.

NURSES

The duty of the ward nurse shall be such as is usually performed by trained nurses in civil hospitals of like general character. She will be responsible for the administration of medicine and treatments, and the care and preparation of clinical reports and charts. So far as practicable her tour of duty shall not exceed eight hours a day. She will not be re-

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quired, except under stress of emergency, to serve more than one month in three on night duty.

Day nurses are at all times responsible to the head nurse for the proper service of the ward.

Night nurses are responsible during the night to the supervising night nurse, if there is one; otherwise they are directly responsible to their respective head nurses for the night service of the wards. In either event, the night nurses on being relieved by the day nurses, will make written reports of their work to their respective head nurses.

REGULATIONS FOR PATIENTS

Card playing, social or otherwise is strictly forbidden.

Boisterous conduct in or near wards is forbidden.

Smoking in the wards is forbidden, except when permission is granted in each case.

All beds will be kept in an orderly condition and all blankets folded evenly.

Card playing and conversation in the recreation room is forbidden after 9:00 P.M.; conversation and noise are also forbidden in wards after 9:00 P.M.

Patients who have venereal disease will report that fact to the ward surgeon.

Syphilitic patients will carry their own eating utensils; plate, bowl, saucer, fork, knife and spoon. They will care for these things and if lost will be charged with the cost. They will not use others' utensils.

Patients will not utilize edibles bought by friends unless authorized by ward surgeon.

Patients will wear their identification tags at all times.

Patients able to leave their beds will bathe at least twice weekly.

The introduction of intoxicating liquors in any part of the hospital is forbidden.

Visiting hours are granted daily between the hours of 2:00 and 4:00 P.M. Written permission must first be obtained at the receiving office before visitors can see patients in wards.

Lights in the wards will be extinguished at 9:00 P.M.

Clothing of patients will not be kept in wards; it will be turned over to the wardmaster for disposition.

Patients will not leave hospital without first obtaining permission in writing of the commanding officer, nor will they visit the dispensary, or other rooms or wards without proper authority.

Convalescent patients designated by the ward surgeon will perform the light work pertaining to the hospital.

A patient wearing his clothes will not occupy a bed. All convalescent patients are required to keep their own beds in an orderly condition and assist the ward master in police of the ward.

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Patients not confined to bed will habitually wear pajamas, dressing gown and shoes or slippers.

During the morning and evening visits of the surgeon every patient will be in his ward. Patients able to do so will rise when the medical officer enters the ward and will remain standing at the foot of the bed until prescribed for or otherwise ordered. Other patients will cease occupations.

Money and valuables should be turned over to the receiving officer or the ward surgeon for safe keeping, patients retaining money and valuables do so at their own risk.

Patients going to duty will not be given their clothes until the morning of the day they are to leave. When they receive their clothing, money and valuables, they will receipt for them.

Each patient on admission will be given a bath, unless his condition forbids it. Patients are expected to bathe at least twice a week.

Patients will wear the convalescent gown when going outside their wards.

Except in special cases, passes will not be issued to patients. When passes are issued, the special reason therefor will be indorsed on the back of the pass by the ward surgeon concerned.

Detachment of Patients.—The adjutant, or a designated commissioned assistant, will act as c.o. of the detachment of patients.

One noncommissioned officer of the Medical Department will be detailed in charge of all records pertaining to patients in hospital, except the sick and wounded records. He will prepare muster lists and payrolls, service records of patients, post exchange accounts and all correspondence pertaining thereto.

Officer Patients.—Patients will not leave the ward until the ward surgeons have made their morning rounds. They will not leave the hospital without permission from the ward surgeon; and will not remain out after 9:00 P.M. without special permission from the ward surgeon. Each patient must be in his own room before 9:00 P.M.

When leaving the ward, patients will register name, time of departure and destination in the "departure book", and upon their return, the time of return will be entered.

Patients on special diet will not be absent from meals without special permission. The hours for meals will be as follows: Breakfast, 7:30 A.M.; dinner, 12:30 P.M.; supper, weekdays at 5:30 P.M., and Sundays at 5:00 P.M. Patients on full diet will not be served at other hours, nor in their rooms unless confined to bed. Patients on any other diet will be served at regular meal hours, and when directed by ward surgeons.

Guests of officers will not be served meals at the hospital.

Visitors.—Visiting hours will be from 2:00 to 4:00 P.M. daily. Patients in the venereal wards will not be permitted to receive visitors in any part of the hospital.

DETENTION WARD

The noncommissioned officer in charge of the detention ward, or, in his absence, the wardmaster, will be held responsible for the proper carrying

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out of whatever special instructions he may receive, from time to time, from the ward surgeon, and for the regular observance of all general orders affecting either the man on duty or the patients and prisoners in the ward.

No medicines shall be given to patients for self-administration. Each dose of medicine prescribed shall be administered by the nurse in charge. No medicine or bottles shall be left where patients may procure same.

All attendants are forbidden to strike or maltreat patients, and any attendant so offending shall be punished, unless he can prove that his action was necessary in self-defence, to save life, or to prevent escape of prisoner or patient.

A daily search, before 9:00 A.M. shall be made of the ward proper, including all possible hiding places, for any property or dangerous implement, that any patient or prisoner may have concealed.

No patient shall be admitted to nor any prisoner confined in the ward, except upon the signed order of a medical officer. Upon admission, care will be taken that all the patient's clothing is removed, listed, and stored in the baggage room. Lockers, boxes, or clothing of patients will not be allowed in the detention building.

Any patient having a complaint to make, shall be allowed a hearing by a medical officer. No patient or prisoner will be allowed in the attendant's room at any time, nor will they be permitted to leave the ward on any pretext, except by express direction of a medical officer, and then under guard.

No visitors shall be permitted to enter the ward proper, or to hold conversation with the prisoners; nor shall any member of the command be permitted to loiter in the room assigned to the ward attendants. Any member of the command who may have to enter the ward on duty will leave as soon as his particular duty is completed.

Except when specially ordered otherwise by the ward surgeon, meals will be served in the dining room only and wardmasters will accompany patients in a body during all the time out of the ward for meals.

The strait-jacket shall never be applied as a punishment; nor for any other purpose, except by the order and under the supervision of a medical officer.

ISOLATION WARD

The wardmaster, under the ward surgeon, will be in charge. He will be held responsible for the carrying out of all orders and will be obeyed by all patients and attendants. When not in contact with cases, he will, assisted, if necessary, by a man not in quarantine, get the meals from the kitchen and prepare them for the wards. The diets will be taken to the wards and left at the door. Upon completion of the meals, the dishes will be left outside the ward door, collected by the wardmaster, and taken to the pantry where they will be immediately washed in boiling water. In taking meals from the kitchen, every effort will be made to keep hot and cold dishes separate and in good condition; only the food containers will be returned to the kitchen.

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When a patient is admitted, he will be assigned to the proper room by the ward surgeon, and thereafter will remain in that room, or, when permitted, on the porch immediately in front of the room. Upon admission, the patient's clothing will be taken and listed, as in other wards, the clothing will be disinfected, sent to the main clothing room and kept there until the patient goes to duty, at which time he will sign a receipt for the clothing delivered to him. Prior to being returned to duty, each patient will be given such course of disinfection by the ward surgeon as the case demands.

When an attendant is detailed to care for any contagious case, he will sleep in the room and be responsible for its police and that of the adjoining porch. He will not leave that part of the building except by permission of the ward surgeon. He will take with him from the barracks, such clothing as can be disinfected at the completion of his tour of duty, and while on duty will wear only washable clothing. When relieved from duty in his ward, he will take an antiseptic bath, wash his hair, gargle his throat and put on a complete outfit of clean clothing.

No visitors, except medical officers, will be allowed in the isolation ward. Attendants will see that this order is strictly complied with, and will order anyone away who may be found loitering near or attempting to enter the building.

When members of the Army Nurse Corps are detailed for duty in the isolation ward, the same rules will obtain as for Medical Department attendants. Meals for nurses will be taken to the steps of the ward by the janitor of the nurses quarters, and then taken to the door of the ward by the wardmaster.

All clothing and bedding used in the ward will be disinfected by immersion in liquor cresolis compound before being sent to the laundry; it will be placed in a bag and marked "Isolation Ward." Mattresses and pillows will be sent to the officer in charge of the disinfecting and sterilizing plant, for disinfection in the steam sterilizer.

Whenever a room is emptied, it will be tightly sealed and disinfected with formaldehyde for such time as the ward surgeon may direct.

DEATHS

In case of death, the remains will be inspected at once by the ward surgeon or the officer of the day. Reports of death will immediately be prepared, and the following data filled in on each form: name, rank, organization, ward, and time, date and cause of death. This form will be signed by the ward surgeon, with the least practicable delay, and sent to the office of the adjutant.

The ward surgeon will, at the earliest possible moment, secure the effects of the deceased and, after making a complete inventory, deliver both the effects and inventory to the adjutant or a person designated by the commanding officer.

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DISPENSARY

A sergeant of the Medical Department will be in charge of the dispensary. He will compound the prescriptions signed by medical officers on duty at the hospital; and will file all prescriptions received, as required by the Manual for the Medical Department.

All prescriptions must be signed, dated and numbered.

Three files for prescriptions will be kept, one for ordinary prescriptions written for those entitled to gratuitous medical service, one for civilians and one for liquors, narcotics, and alcohol. If a prescription calling for liquor, etc., for a civilian comes in, this should be placed in the file for civilians, but a true copy of it entered in the liquor file. Prescriptions will be written in the metric system, signed by the officer with his official designation, and properly dated.

A form such as the following will be verified and signed by the adjutant weekly:

	Alcohol	Whiskey	Brandy	Sherry wine
On hand brought forward.....				
Issues per prescription.....				
Balance on hand.....				

Verified:
(Date)_____ 19

_____

_____Medical Corps, U.S.A.

Active poisons, alcohol, alcoholic liquors, and all habit-forming drugs will be kept under lock and key in a separate closet. All poisons will be labeled as required by law.

No issues or deliveries of medicines or supplies will be made from the dispensary without proper authority. Orders for original packages must be approved by the medical officer in charge, and will be filed in the medical property office.

Alcohol, alcoholic liquors, opium and the salts, derivatives and preparations of opium or cocoa leaves, will be issued to wards from the dispensary upon prescriptions only. Prescriptions should call for the quantity required for immediate use, and should be made out in the name of the patients for whom prescribed.

PATHOLOGICAL LABORATORY

A medical officer, assistant to the chief of the medical service, will act as the pathologist.

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He will make such examinations of specimens as are requested by ward surgeons on proper forms, from the several services of the hospital, and will make report of result of such examinations directly to the ward surgeon requesting them.

He will make all postmortem examinations and preserve a record of all autopsies performed. Postmortem examinations will be made in cases of all officers and enlisted men of the regular army who die in this hospital; but in cases of civilian and militia, authority will be first obtained from the commanding officer.

He will make all vaccinations that are required, and will keep a proper record thereof.

X-RAY LABORATORY

The X-ray and other therapeutic appliances will be under the charge of a medical officer, who will be detailed for this work in addition to his other duties.

Requests from ward surgeons for X-ray examinations, or for treatment by the use of electrical appliances, will be sufficient authority for the use of the apparatus. Examination of outpatients, or patients not in hospital from other posts, should be first approved by the commanding officer and report of these cases sent to the adjutant's office.

X-ray records will be safely filed, and indexed for ready reference.

A noncommissioned officer of the Medical Department will ordinarily be detailed as assistant in this laboratory, for the care of the property, clerical work, etc.

BAGGAGE ROOM

The commanding officer, detachment of patients, will have charge of the storeroom for patients' effects. The storeroom will be divided into two departments; the clothing room and the baggage room, with a single office in which all records will be kept.

The noncommissioned officer on duty in the patients' property room, under direction of the commanding officer, detachment of patients, will be responsible for the proper keeping of all records, the safe keeping and care of all property in the storeroom, and the proper performance of duty by the enlisted assistants therein. The following records will be kept:

A file of cards for the effects of patients in hospital; this will be known as the "live" file.

A file of cards for the effects of patients who have left hospital, and who have taken their effects with them; this will be known as the "dead" file.

A file of cards for effects of patients who have left hospital and who have not taken their effects with them; this will be known as the "suspended" file.

Efforts will be made to promptly dispose of the effects left in the baggage room by patients who have left hospital. When such effects have been disposed of, the record card for same will be transferred from the "suspended" file to the "dead" file.

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Effects of deserters, deceased soldiers and civilians will be disposed of in accordance with Army Regulations.

The clothing worn by patients at time of admission, and their hand baggage, will be kept in the clothing room. A separate compartment will be used for each person's effects. The articles will be enumerated on duplicate cards, one card for the "live" file, and the other for the patient. Upon being returned to duty, or going on pass, the patient, accompanied by the wardmaster, will present his card together with an order for his clothing, signed by the adjutant or the commanding officer, detachment of patients; the patient will receipt for his clothing on the retained card, which will then be returned to the file.

When received, baggage will be labeled carefully with the name, rank and organization of the owner, and its condition noted; these data will be entered on duplicate record cards, one set for the property of each person. One card will be given to the owner of the property as a receipt, and the other retained in the "live" file.

Baggage will be removed only on the order of the adjutant or the commanding officer, detachment of patients, and the person removing such baggage will receipt therefor on the record card which will then be filed.

The quartermaster will be notified whenever baggage is to be removed, in time to transfer the baggage to the train upon which the owner expects to depart.

The key to patient's property room and to the arms rack will be turned over to the officer of the day, daily, at 7:00 P.M. and at any other time when the n.c.o. in charge of patients leaves the hospital.

MEDICAL DEPARTMENT LIBRARY

The Medical Department library will be under the supervision of the medical property officer.

Books may be removed for personal use, by officers on duty at this hospital, or by the chief nurse. Medical officers on duty elsewhere, and nurses on duty, may borrow books with the personal permission of the adjutant in each case.

A record book will be kept in the library, in which will be noted the title of the book, name of the borrower and the date taken; on return of borrowed books entry of date of return will be made by writing in the date.

Books will not be kept for a period of more than five days for personal use, except by officers.

It having been found desirable to maintain permanent sections of the library in certain departments, memorandum receipts will be given the medical property officer for all such books, as follows: for the office of the commanding officer, office of the adjutant, and the dispensary, by the adjutant; office of the chief of surgical service and the operating pavilion, by the chief of surgical service; by the chief of medical service, for his office; by the chief of laboratory service, for the laboratory; for the eye, ear, nose

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and throat clinic, by the chief of that service; for the registrar's office, by the registrar; and by the chief nurse for her office.

GENERAL LIBRARY

The general library of the hospital will be under the charge of the property division.

Lists of books in the library will be furnished to the various wards and to the Medical Department quarters.

Members of the Medical Department will draw books desired from the sergeant in charge of the property division who will charge them with the same in a book kept for that purpose.

Patients desiring books will inform the wardmaster who will procure the books from the library and give receipt for the same. The wardmaster will make a memorandum of the books in possession of a patient, cause him to sign it, and attach it to the patient's clothing list.

Books may be procured gratuitously by patients and members of the detachment, turned in, or exchanged, between the hours of 2:00 and 4:00 P.M. daily.

No book will be kept out of the library without renewal longer than one week.

A record will be kept of all books issued, and their return properly checked. This may be done either by book or cards, as is preferred by the librarian.

The ward slip of each patient will be sent to the library before his discharge, in order that the loan of the book may be entered upon it.

Patients and others will be compelled to pay for books injured, lost or stolen while in their possession.

REGULATIONS FOR THE BILLIARD AND POOL ROOM

The mess sergeant will have general supervision over the pool room. He will keep separate accounts showing the daily sales of merchandise and the number of games of pool and billiards played. He will require the attendant to submit a list to him daily accompanied by the cash receipts received.

Each Sunday morning he will submit such lists to the surgeon, together with a list showing the number of pies and cases of pop purchased during the week.

The rates for playing pool are fixed as follows:

8-ball pool	2½ cents per cue
15-ball pool	5 cents per cue
Bottle pool	5 cents per cue

Games will be open for all who care to play.

Any damage to a pool or billiard table will be reported promptly to the mess sergeant or in his absence to the senior noncommissioned officer on duty. Such damage will be charged against the party or parties responsible for it.

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Tickets will be sold for 24 cues for $1.00, each purchaser receipting in the book kept for that purpose for each ticket received. Each ticket will be numbered and the number entered opposite the purchaser's name.

Credit will be limited to one-third of the pay received by the purchaser.

Tickets will be paid for on each pay day.

The mess sergeant will keep record of the tickets sold and each Sunday morning will report to the surgeon the number sold during the previous week.

The billiard and pool hall will be open until 11:00 P.M. to members of the Medical Department who are off duty.

When the hall is not in use, the key of the hall and the billiard balls will be kept in the dispensary.

When these articles are wanted the party calling for them will receipt for them. He will be held responsible for their safe return and for payment for their use while out. The billiard balls will be issued only to those having tickets. The amount due for the time they are out will be punched from the borrower's ticket.

Fifteen cents per hour or fraction thereof will be charged for the use of billiard balls.

The attendant in charge of the amusement room will care for the billiard room.

Patients will not be allowed the use of the billiard table.

POST EXCHANGE

The post exchange will be conducted in accordance with the requirements of Army Regulations.

The post exchange will be open from 8:30 A.M. to 8:30 P.M. except Sundays and holidays, when it will be closed between the hours of 12:00 M. and 5:30 P.M.

BARBER SHOP

Syphilitic patients will not be allowed in the barber shop. Whenever any of these patients require work done the wardmaster will notify the barber, the latter will go to the syphilitic ward, perform the necessary work and will disinfect his hands and instruments before returning to the barber shop. Separate razors, brushes, cups, combs, scissors, straps, etc., will be kept for use on syphilitic patients and under no circumstances will these implements be used on other patients or Medical Department men.

The barber shop will remain open from 9:00 A.M. to 6:00 P.M. daily except on Sundays and holidays, when the option will be given the barbers of closing the shop altogether.

Prices charged for barber work will be as follows: hair cutting, 25 cents; shaving, 10 cents; shampooing, 25 cents; massaging, 25 cents; hair tonics, 10 cents. No extra charge will be made for attendance in wards on bed patients or officers.

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GARAGE

Motor ambulances will be used for the following purposes only: the transportation of the sick and wounded, and the absolutely necessary nurses and attendants on duty therewith; the recreation of convalescent patients; the instruction of the Medical Department in the duties of the ambulance service, and in the field, in urgent cases, for the transportation of medical supplies. They will also be used for the transportation of medical officers on duty at this hospital, who live without the post.

The chauffeur in charge of each ambulance will be held strictly responsible:

(*a*) For cleanliness and neat appearance of his ambulance.

(*b*) For the completeness of its equipment.

(*c*) For the observance of the speed limits and rules of the road.

Speed limits in most towns and cities are 16 miles per hour and 8 miles per hour when passing public schools. Unauthorized violation of these speed limits is strictly prohibited.

In special cases, in necessity, the speed limits may be exceeded, but only upon direct order of a medical officer or n.c.o. in charge of the ambulance.

Unauthorized persons will not be permitted to ride on motor ambulances. The n.c.o. in charge of the ambulance, or in his absence the chauffeur, will be held responsible for the enforcement of this regulation.

Motor ambulances sent to the city or other points are under orders for certain specific duties. These duties will be accomplished promptly and return made to the hospital.

Motor ambulances, and other vehicles belonging to the Medical Department will not be stopped or allowed to remain outside a saloon, or other places where intoxicating liquor is sold.

Intoxicating liquor, except regular medical supplies, will not be carried on motor ambulances.

Chauffeurs will at all times appear neatly dressed in the prescribed uniform.

Motor ambulances will not leave their parking space at the hospital except when so ordered by proper authority.

When an ambulance goes out on a call the driver will phone the hospital when he is ready to return, so that he may make any other required calls on his way back.

Ambulance drivers will turn off their engines when they leave their ambulances, or when they are waiting.

A book will be kept in the receiving office, in which ambulance drivers will register their arrivals and departure. They will drive past the receiving office on leaving the hospital, and on return, and will register at these times.

Orders for leaving the hospital will be issued by the commanding officer, the adjutant, the officer in charge of the receiving office, and the officer of the day.

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STABLES

The stable sergeant is responsible for the police of the stables and their surroundings, for the condition and care of the vehicles, harness, horses and mules, for the conduct and efficiency of his subordinates. He is the custodian of the forage and of stable property generally.

He will keep himself informed as to the necessity of repairs on vehicles, promptly reporting the same.

In addition to his specified duties he will act as driver if so required.

He or one of his subordinates will sleep in the room provided for that purpose in the stable.

Smoking in the stables or their immediate vicinity is prohibited.

Horses will be stabled according to their positions in teams.

Adequate ventilation of stables will be provided. Stable doors will not be closed during the day except to keep out rain, snow or cold winds.

When circumstances permit, animals will be turned loose in the day time in the stable yard.

Animals will be groomed twice daily, at morning and evening stables. They will not be blanketed in stables except in very cold weather. Stables should be cool or cold, but animals should not be exposed to a draught.

IN CASE OF FIRE THE FOLLOWING RULES WILL BE OBSERVED

1. Perfect orderliness will be maintained.

2. The person first discovering the fire will give the alarm, and at once notify the senior noncommissioned officer on duty. The latter will immediately notify central, the commanding officer, the medical officer of the day, and the other medical officers in the order of their seniority. He will then direct every effort to extinguish the fire and remain in charge until a medical officer or the fire marshal arrives.

3. Captain ————, Medical Corps, is appointed fire marshal and will take immediate charge of the situation on his arrival.

4. Wardmasters will not leave their wards until ordered to do so. Patients will remain in their wards until removal is ordered, in which event helpless patients will be removed first. Provision for the prompt removal of patients will receive consideration as soon as the fire is discovered.

5. The noncommissioned officer in charge of property will have storerooms opened and make preparations to remove all property. The men assigned for duty in the storerooms will report to him at once.

6. The clerks in the record office will prepare to remove all records and will remove them promptly when so instructed. Records will be removed before any other property if their integrity is threatened.

7. The outside police will report to the senior noncommissioned officer for instructions.

8. The kitchen force (excepting the cooks) will report to the noncommissioned officer in charge of property. This order applies to the men on duty in the mess hall, the scullery and to the kitchen police.

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9. The cooks will remain in the kitchen and prepare to remove property when so instructed.

10. In case of fire at stables the animals will be removed at once and tied to the picket line. Vehicles and other property in the stable will be removed later in the order of its value.

FIRE DRILL

This formation will be held at frequent intervals and will be so conducted as to familiarize all men of the detachment with the use of the fire apparatus, length of hose, etc.

PRESENT ORGANIZATION

In connection with the organization of Base Hospitals the following should be noted. The memorandum previously issued by the Surgeon General is amended to provide for three Services; namely, Surgical, Medical, Laboratory, with a Chief for each Service, and, further, to provide that each of these Services shall include the following special Sections or as many as may be necessary (500 bed basis):

SURGICAL SERVICE

1 Chief of Service { General / Chest
4 Surgeons { Abdomen / Fractures

4 Surgeons { Brain / Eye
Head Section { Ear, Nose and Throat / Plastic (Face and Mouth)

1 Surgeon—Orthopedic
1 " —Urology
1 Roentgenologist
2 Dentists

MEDICAL SERVICE

1 Chief of Service
4 Physicians (including 1 Neurologist)
1 or 2 Psychiatrists
(In Camp Hospitals in U. S.)

LABORATORY SERVICE

(Includes Pathology, Bacteriology, Serology Chemistry, Morgue and Public Health Laboratory work for) the Command.
1 Chief of Service (To cover Pathology, Bacteriology, Serology).
1 Assistant (All other Laboratory workers are under the Chief of this Service.)

For the Head Section a Section Chief may be designated, if desired.

The Commanding Officer will organize a convalescent camp as the conditions warrant.

The Nursing Service remains as at present, with the provision that the number of nurses may vary according to the needs of the Service.

Attention is called to the fact that the provision of the several specialists in the Medical and Surgical organization is solely for the purpose of providing competent professional attention for the sick and wounded. The individual members of the staff, although assigned to duty with the organization for the purpose of providing special skilled service as the occasion may warrant, are nevertheless to be used as the Chiefs of Service and the Commanding Officer may direct. This provision is made in order that the work may be properly covered at all times and in order to accomplish the results expected of good organization and administration.

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CHAPTER XIII

THE SANITARY SERVICE OF CAMPS OF MANEUVER AND INSTRUCTION

The duties of the camp surgeon of a maneuver camp are similar to those of the department surgeon of a territorial department. There are added, however, certain others such as those pertaining to field sanitary problems, courses of instruction etc., in the performance of which he is guided to a degree by the provisions of the Manual for Maneuvers, by instructions from the Surgeon General, and by the orders of his immediate commanding officer, but wherein much is left to his own initiative.

The text of the Manual for Maneuvers should be consulted. It gives the camp surgeon authority, with the assent of the commanding officer, to give orders in matters affecting sanitation.

The instructions and queries from the Surgeon General's office usually take the form of a letter such as the following:

"I am directed by the Surgeon General to say to you that he desires that the fullest advantage be taken of the concentration of troops in camps for maneuvers to give practical instruction to officers and men of the Medical Department in their duties in the field. The scheme of instruction is left to the initiative of the camp surgeon of each camp, but it is very desirable that there should be a systematic method of procedure which will accomplish the greatest amount of benefit practicable in every case, and especially that the reports of work done by the Medical Department should be along parallel lines, in order that they may be collated and the results of the experience gained be recorded for future use. It is therefore directed that as soon as practicable after the completion of the camp, you make a report to this office, covering the ground indicated by the following questions:

I. SANITATION IN CAMP

"(*a*) Was the camp site inspected by a properly detailed medical officer prior to the laying out of the camp, as required by the provisional instructions for maneuvers? If so, what defects were noted in the report of the medical officer, and what action was taken to remedy them?

"(*b*) What was the method employed to carry out the provisions of provisional instructions for maneuvers concerning sanitation?

"1. Was a sanitary inspector appointed for the camp?

"2. If so, give his name, duties and instructions given him.

"3. To what extent were the recommendations as to sanitary matters of the sanitary inspector and camp surgeon carried out?

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"4. Was the sanitary inspector authorized to give instructions for corrections of minor sanitary errors, by order of the commanding general?

"(*c*) Water supply in camp:

"1. Source.

"2. Was it sterilized? If so, how?

"3. How stored and distributed?

ON THE MARCH

"4. Was all drinking water sterilized? If so, how?

"5. Water carts used?

"6. What were the orders in regard to drinking water and to what extent were they observed?

"Report fully upon the methods of purifying water in camp and on the march, and especially upon the Lyster water bag.

"7. Were all troops protected by prophylactic treatment against typhoid and paratyphoid fever?

"(*d*) What system was adopted for the disposal of excreta?

"1. Defects noted.

"2. Was any better system practicable?

"3. Character of latrines?

"4. Distance from tents?

"5. Were latrines for troops on opposite flank of company from cook tents?

"6. Were urine tubs used in camp?

"7. What method of disposition was made of garbage?

"8. Was it satisfactory?

"9. Was it carried out by contract labor or troops?

"(*e*) Were kitchen and mess tents screened?

"1. Food protected from flies?

"2. Cots used?

"3. Mosquito bars used?

"4. Soldiers required to wash hands before meals?

"5. Describe bath, lavatory and laundry facilities.

"6. Were sanitary squads used?

"What suggestions are made as the result of your observations under this head?

II. MEDICAL ORGANIZATION

"(*a*) Give the personnel of the various organizations assembled, such as regimental hospitals or infirmaries, field hospitals, ambulance companies, etc.

"(*b*) To what extent was there interchange of personnel between the Medical Department of the Army and the militia?

"(*c*) Was there any systematic instruction of the medical officers and enlisted personnel of the militia by lectures, talks, circulars, etc.

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"1. Were meetings for such purposes well attended by them?

"2. Report by organization the strength of the medical personnel, and the medical equipment brought to camp by the militia organizations.

"3. How often were the field hospitals moved in accompanying troops?

"4. Was the coöperation between them and the ambulance companies satisfactory?

"What suggestions are made as a result of your observations under this head?

III. FIRST AID AND TRANSPORTATION OF WOUNDED

"(*a*) Give any defect noted in the standard litter, ambulance, etc.

"(*b*) What is the best method of pack transportation for medical supplies in battle or on the march?

"1. What kinds of packs and how many used?

"(*c*) What systems of distribution of diagnosis tags were used?

"1. Did the men tagged, as a rule, fall out?

"2. Past experience would seem to indicate that the best results are obtained when tags are distributed by a medical officer on duty with troops (after consultation with the commanding officer) and preferably to men already partly disabled or likely to fall out, as real patients.

"(*d*) What practical work was done by the ambulance companies?

"What suggestions are made as a result of your observations under this head?

IV. MEDICAL SUPPLIES

"(*a*) Is the equipment of the enlisted men satisfactory?

"1. What is your opinion as to the suitability of the M.D. equipment?

"(*b*) Were the medical supplies adequate in quantity and satisfactory in quality?

"(*c*) Were the medical organizations of the militia adequately supplied?

"(*d*) Was their equipment standard; if not, was it of a satisfactory character?

"(*e*) Were complaints made of difficulties in getting supplies from the medical department of the army by militia officers, and if so, due to what fault?

V. FOOD

"(*a*) Did the militia organizations have company, battalion or regimental messes?

"(*b*) Were the cooks enlisted or civilian?

"(*c*) Defects noted in their food or messing arrangements?

"(*d*) Were experiments in use of the fireless cooker furnished by the Q.M. Corps made, and if so, did this apparatus seem to be of any value?"

The camp surgeon of a maneuver camp must lead a very active life. The volume of his work is enhanced by constantly changing conditions, *i.e.*, loss (from various causes) of the personnel of his department, the necessity of providing for emergencies and, so far as may be, preventing them. He is

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also required to rely upon the services of men who in many cases have had little or no experience in administration. He must prevent, detect and correct their errors, and from time to time issue circulars conveying such information as appears most required. His work must be educative, in order that future errors may be avoided, as well as corrective for present ones. Methods of general procedure must be indicated as well as the specific methods applying more or less to peculiar conditions.

The duties of camp surgeons are more specifically, in part, as follows:

1. Assist in selection of camp site if so directed.

2. Organize his office, determine its methods and select his office force, instructing them in their prospective duties.

3. Obtain orders directing the inspection of troops before their departure for camp, with a view to the elimination of those suffering from infectious disease or other disability.

4. Obtain orders calling for reports on camp sites, water supply used, etc., from surgeons on duty with troops which have marched any portion of the distance to camp.

5. Obtain orders for the inspection of the prospective camp site, before occupancy, by a sanitary inspector.

6. Obtain authority to issue necessary orders to effect desired assignments of sanitary personnel in maneuvers (see Manual for Maneuvers).

7. Obtain authority to issue necessary orders affecting desired instruction of sanitary personnel.

8. Select sanitary inspector and sanitary officer.

9. Formulate orders affecting sanitation including the designation of duties of all concerned in connection therewith and submit same to commanding officer for approval and publication.

10. Formulate plans for instruction of sanitary personnel in as great detail as may appear expedient.

11. Issue orders for obtainment of prompt report of sanitary personnel by the senior surgeons of organizations on arrival in camp, such reports to include names and rank of medical officers, and number of medical department men of each grade on duty therewith.

12. Assign sanitary personnel.

13. Establish infirmaries, field hospitals, ambulance companies, sanitary supply depots, etc.

14. Formulate orders in regard to sick call and emergency calls.

15. Issue order that the senior medical officer of each unit report at once, to the camp surgeon's office, the name of any patient in his care suspected to be suffering from an infectious disease.

16. Issue order that the senior medical officer of each unit render at a given hour daily to the camp surgeon's office, a numerical report of sick and wounded of the command with which he is on duty, and of the sanitary personnel on duty with that unit.

17. Issue instructions how to close units and to render the necessary final reports.

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The first duty of the camp surgeon may be to assist in the selection of a camp site. In makng such a selection, he is to be guided not only by the requirements laid down in the Manual for Maneuvers, but by those general rules of hygiene and sanitation which are apposite. Even if the camp site selected be one previously utilized and found satisfactory, it should be inspected again by a medical officer detailed for that purpose. Such inspection should consider especially the quantity, quality and accessibility of the water supply, the character of the soil and vegetation, the drainage of the terrain, the number and cleanliness of dwellings on the proposed area and the freedom of the inhabitants from disease, the facilities for obtainment of supplies and for internal communication.

Prior to the commencement of the camp, the camp surgeon should request, through official channels, that the surgeons of all commands coming thereto be instructed to examine, if possible, every man in their respective organizations, within twenty-four hours before departure from their home stations. The object of this examination is the detection and elimination of those persons who may be suffering from or conveying infectious diseases, including typhoid fever, or from other ailments which would unfit them for active service. This is a matter of such great importance that every effort should be made to carry it into efficient execution.

At this time also the camp surgeon should request the senior surgeons who will accompany commands of regular troops to the camp, to make note of and report anything of interest affecting the personnel, equipment and sanitation enroute. Such a report would include a discussion of the sanitary conditions of the several camps enroute, including the water supply of each, prevalence of infectious diseases in their neighborhood or on the line of march, recommendations made concerning sanitary subjects and actions taken thereon, etc.

If troops are to come to camp from other territorial departments, letters should be sent through the commanding general of the department in which the camp surgeon is yet serving, to the commanding generals of the departments whence such troops are expected.

The first duties pertaining to the establishment of a camp surgeon's office are the selection of its personnel and provisions for the care of correspondence and records. The selection of this office force is one of his most important duties in the camp. In effecting it a very careful estimate of the personal coefficient of each individual so detailed, is essential. Upon the knowledge, efficiency, fidelity and earnestness of his assistants depends to a degree the success of his administration. These assistants are called upon to discharge many details of routine work and sometimes in the absence of the chief, to meet emergencies in a manner requiring their best efforts. To each, as soon as he is selected, whether commissioned, noncommissioned or civilian, should be specifically allotted work of that character and quota for which he appears to have a special aptitude.

The same methods of office administration are employed as in offices of department surgeons in time of peace, but the office force as a rule must be

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somewhat larger proportionately because of the greater amount of work that must be done. Records are kept in a manner very similar to that usually employed in post hospitals. Small index cards, 5 by 3 inches, will be found more convenient then the correspondence book. These can be filed in a cigar box or other small receptable and ordinarily they are large enough to contain all required data. If, in exceptional cases, they should not prove large enough for their purpose, one card may be supplemented by another, the two being fastened by a clip. The camp surgeon's office should have as part of its equipment a mimeograph, or other similar instrument, on which general orders, circulars, etc., may be manifolded.

There are kept filed in numbered sequence, copies of letters received, letters sent, orders received, orders issued, circulars received or issued, reports received and rendered, etc. All orders, circulars, etc., should be kept in separate files. Thus, one file is kept for orders from the War Department, one is kept for orders or circulars issued from the department surgeon's office, another is kept for letters sent and received, another of the problems issued from the chief umpire's office, etc.

Since camps of instruction seldom last more than a month, these files may be kept in a different manner from that usually employed. A number of boards, 12 by 1 by 15 inches are obtained. One of these is labeled at the top, "Orders Received, War Department;" another, "Circulars, Department Surgeon's Office;" another, "Problems, Chief Umpire's Office," etc. On each of these boards is pasted at the top of each sheet only, the documents belonging in that particular file. Thus, in the file of General Orders received from the War Department, the first order received is pasted, by a narrow margin along its top, on the board labeled, "General Orders Received, War Department." The second received is pasted along its top in the same manner, by a narrow margin only, over the first one, and so on. The result of this device is to secure an arrangement, whereby the orders are arranged in chronological sequence, the earliest being next to the board, and the latest being the first one seen when the board is picked up. The orders can be turned back, like the leaves of a writing pad, very conveniently. The board to which they are fastened makes the file easy to handle, as it is light and of convenient size. Letters, however, and reports received and sent, should be kept in a file box or tray, in the same manner as are those in a department surgeon's office. A very good tray for this purpose is that of the regulation box locker. Its compartments are of suitable size, it can be locked up at night, and it is so light that it can be handled readily.

A surgeon's morning report of sick is made up as soon as practicable for the information of the commanding officer of the camp. This may be rendered on Form 71, M.D., in the same manner as in a post or it may be made on the consolidated daily field report of patients, Form 84, M.D.

Prior to the opening of the camp, the camp surgeon will have formulated his plans for sanitation and for instruction of the sanitary personnel, and will have embodied them in recommendations, to the prospective commanding officer. When approved, they are published as a part of the General

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Orders governing the camp. In addition to these orders, the camp surgeon may formulate within prescribed limits and publish such orders as may affect the sanitary personnel only, or request their publication by the adjutant general of the camp.

Orders governing the sanitary service of the camp, must be adapted to local physical conditions and climate, to the knowledge of sanitation which officers and men, there present, already possess, to the facilities available for effecting sanitary measures, etc. Orders issued for troops that have had but scant experience in field service, may include many statements of an explanatory character such as would indeed be more appropriate in a circular. Some such explanatory statements will often secure more intelligent support than could be obtained otherwise, but if orders are too long, important points are not duly emphasized, since they are scattered among non-essentials. Also if too elaborate, orders are either not read, are forgotten, or, by creating an attitude of impatience defeat their purpose, unless disciplinary means for their enforcement are employed.

The following is a digest of the more important orders affecting sanitation published at various maneuver camps:

The **camp surgeon** will supervise the hygiene and sanitation of the entire camp. Under his direction daily sanitary inspections are made; if faults are found the attention of regimental commanders will be called to them, and the necessary steps will be taken by the latter for their correction. Any failure to remedy unsanitary conditions will be reported to the commanding general.

The **sanitary inspector** will visit daily and inspect minutely the camp of every organization in the command. He will bring to the immediate attention of the proper commander anything needing correction. He will note in a book kept for this purpose, the result of his inspections, together with his recommendations which he will present daily in person to the camp surgeon.

The **sanitary officer** will make daily requisition on the camp quartermaster for such transportation, labor, and material as he may need. When assigned to this service they will not be diverted to other uses except by orders from these headquarters, or unless turned in as no longer needed.

Camp **sanitary squads** consist of details from the Medical Department, civilian employees, and the garbage contractor. They are under the direction and control of the sanitary officer, who will receive his orders from the sanitary inspector. The sanitary officer will be responsible for the removal and disposal of all wastes and the police of all places for which commanding officers are not responsible. He will manage the large communal incinerators and the dump and will make every endeavor to maintain the camp in the best sanitary condition.

Police.—Commanding officers will be held responsible that kitchens, incinerators, bath houses, company streets, and surroundings are always kept clean and orderly. Each company provided with the necessary brooms, shovels, gunny sacks, etc., and under the supervision of a commissioned officer will at police call make a thorough police of the camp

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ground and load the waste into wagons furnished for this purpose. No company will be dismissed from police until so ordered by its battalion commander after careful inspection of the work performed. The collected waste will be removed under the direction of the sanitary officer. General neatness and orderliness will be maintained at all times. The interior of tents will be kept clean, and clothing, blankets and bedding spread out in the sunlight daily when weather permits. Tent walls will be raised daily during the day time in fair weather, and tents will be adequately ventilated at night. Tents must be struck or furled occasionally. Battalion commanders, accompanied by company commanders, will inspect grounds, tents, kitchens, baths and incinerators daily.

Kitchens.—All food and water in camp will be protected from dust, flies and sun. Dining places will be established in each company, and men will not be allowed to take food into their tents. The meat can and other eating utensils will be cleaned thoroughly after using. Garbage including liquid wastes not destroyed in kitchen incinerators will be placed in tightly covered cans. Liquid wastes will be reduced to the minimum consistent with cleanliness. The throwing on the ground of water from kitchens or water in which eating or kitchen utensils have been washed is prohibited. The garbage cans when employed will be removed under the direction of the sanitary officer; they will be kept on the same sites, preferably on stands, and the adjacent ground frequently burned over. After being emptied the cans will be burned out with a wisp of straw, paper, or crude oil. The outside will be kept clean.

Water barrels or cans if employed will be kept securely covered and set on a framework so as to have the faucets 4 feet from the ground. Water will be taken from the barrels or cans in no other way than by drawing it off through the faucets.

Latrines.—Men will be detailed from the companies for duty at the latrines. The sheds, seats and surroundings will be kept thoroughly policed. Seats will be scrubbed with soap and water daily. Whenever practicable, facilities for washing the hands will be provided. Toilet paper must be furnished and a light kept in each latrine at night.

Night Urinals.—Urine tubs will be placed in each company street at taps and their sites marked by lighted lanterns. They will be taken up at reveille, emptied into the latrine, flushed with clean water, burned out with straw and oil and sunned during the day. Tubs will always be replaced for use on the same site and the area will be sprinkled frequently with lime or burned over.

Personal Cleanliness.—Each soldier must bathe at least twice weekly. Underclothing must be changed at least once weekly. Soiled clothing must not be allowed to accumulate. Men must wash their hands thoroughly after going to the latrine, and before each meal. Bath tents must be drained properly and the interior kept clean and inviting.

Prevention of Communicable Diseases.—As early diagnosis is the most important factor in preventing the spread of these diseases, organization

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commanders will cause all cases of indisposition to be reported to the medical officer, irrespective of the wishes of the soldier himself. Any case of suspected contagious disease will be transferred to the field hospital at once, isolated, and reported to the camp surgeon at once.

All cases of fever, however slight the affection may seem, will at once be transferred to the camp hospital, and will under no condition be treated in the camp of the unit. The mildest appearing may in reality be cases of typhoid or paratyphoid fever, and the danger of the spread of infection from the same must be prevented at once. These cases upon arrival at the camp hospital will be treated in a ward devoted to this purpose and will be viewed with suspicion, all the precautions required in the treatment of typhoid fever to prevent infection being rigorously followed in each instance.

A board of officers on duty at the hospital consisting of the commanding officer of the hospital, the pathologist, and the ward surgeon of the fever ward will be formed to investigate every case of continued fever admitted, by thorough clinical and bacteriological means, with a view of establishing an early diagnosis.

When a case of infectious disease has occurred in a unit, the surgeon of the same will not ordinarily quarantine the tent mates of the patient, but will keep them under daily observation. He will disinfect the tent concerned and its contents by means of formaldehyde gas. All openings in the tent will be tightly closed, except the flaps, and earth be banked around the base. The formaldehyde solution with potassium permanganate will then be placed in the tent, and the flaps fastened as securely as possible, the space between them being covered by pasting coarse paper over the same. The tent will be left closed for twelve hours, and will then be opened and thoroughly ventilated. The necessary materials will be furnished from the camp hospital upon application to the commanding officer of the same.

Reports.—As soon as possible after arrival in camp, the senior medical officers of units will submit a report by name of the commissioned and enlisted personnel of their department; also of equipment, including regimental infirmary, medical and surgical or other chests, tentage, ambulance, wagons, draught animals, mounts, etc.

Attention is particularly invited to those paragraphs, Manual Medical Department, wherein the duties of medical officers in the field are outlined, and to the orders and circulars promulgated from the headquarters of this camp.

Return of the Medical Department, reports of sick and wounded and other reports will be forwarded to the camp surgeon monthly or before the command leaves camp, or at such other times as required by camp regulations.

Hospital Service.—The medical officer commanding the camp hospital will report in person to the camp surgeon at 9 :30 A.M. daily, with the report of sick in hospital and sanitary personnel there on duty, and such other matters as he desires to submit for consideration. The daily report of sick

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and personnel of other units must be at the camp surgeon's office at 9 : 00 A.M.

The attention of medical officers with units is invited to those portions of the Field Service Regulations, which refer to the sanitary service. At sick call ambulances will go from the camp hospital to each infirmary with the men returned to duty or quarters, and will return with sick requiring treatment in the camp hospital or transfer elsewhere. When an ambulance is needed at other times request will be made upon the hospital. Transfer cards will be forwarded with each case transferred to the hospital and the case dropped from the register of sick and wounded of the unit. The disposition of such cases will also be noted on the respective company sick books.

Ordinarily two ambulances and litter squads, with two noncommissioned officers, will be kept ready at the ambulance company for immediate call, and all ambulance service will be done by the ambulance company.

At least one medical officer or noncommissioned officer will be constantly on duty with each unit and two privates will be regularly detailed as an emergency litter squad therewith.

Regimental hospitals for the treatment of bed patients will not be organized in this camp. The surgeon of each unit will send those requiring hospital treatment to the camp hospital, the required transfer card will be sent in each instance.

The camp hospital is authorized to exchange soiled towels, etc., for clean linen, piece for piece, between 11 :00 A.M. and 12 :00 M. on Saturdays. Only serviceable linen will be exchanged.

The school of the Medical Department, organized in accordance with a schedule prepared by the camp surgeon, will be attended by all officers and men of that department who can be spared from work with their units. When absent from instruction a report of its necessity will be sent to the camp surgeon.

Medical officers on maneuver duty will submit to the camp surgeon a report of their part in the maneuver as soon as practicable after the completion of the same.

Other orders, supplementary to the above, and of especial service to the sanitary service are the following:

The ambulance equipment of the various units will be concentrated at the camp hospital, where an ambulance company will be organized by the commanding officer of the hospital, with a commissioned officer of the Medical Corps in immediate command. He will give a memorandum receipt for all property received by him.

This company will have the following duties:

(*a*) To furnish guards for the camp hospital when required.

(*b*) To provide transportation and personnel for handling the sick and medical supplies.

(*c*) To establish and operate dressing stations in the maneuvers.

(*d*) To assist regimental personnel at the front when in action.

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(*e*) To convey wounded from the regimental aid station to the dressing station, and from the dressing station to the field hospital when in action.

(*f*) To furnish equipment for camp infirmary.

(*g*) To furnish details for such special sanitary duties as are required by proper authority.

Assignment of ambulances to accompany organizations on maneuvers will be made only with the approval of the camp surgeon.

The use of ambulances, other than as provided for in Army Regulations is prohibited.

Sick call will be held at the hour designated in orders from headquarters, at which hour medical officers detailed, will be at the camp infirmary to take charge of this important function.

It will be the duty of the senior medical officer of each separate command to supply it with adequate medical service at every drill and military ceremony. Each command on drill or maneuver should be accompanied habitually by a medical officer and litter squads. Men falling out shall be cared for on the field, until the end of the drill, at which time, or earlier, if necessary, an ambulance may be summoned to convey them to the hospital.

All surgical dressings made and medicines prescribed shall become matters of record, an order or a prescription being made therefor on the regulation prescription blank and filed in consecutive number.

When a soldier on company sick report is ordered to quarters, a register card must be made on Form No. 52 in accordance with the Manual for the Medical Department, and in addition, a report card. The register cards will constitute the "field register." These will be turned in together with the report of sick and wounded, to the camp surgeon's office, on the day on which a command quits camp. Upon the departure of any separate command in advance of the date of the official discontinuance of the camp the surgeon of the same will make final reports on that date. When a soldier is transferred to a camp or field hospital, a register card must be made out on Form No. 52. in accordance with the Manual of the Medical Department, which will be forwarded with him.

Report cards of sick and wounded will be delivered to the camp surgeon on the last day of the tour of duty, accompanied by a nominal check list, Form No. 51*a*, and in addition the report of sick and wounded, Form No. 51. From these records a statistical report will be prepared by the camp surgeon showing in detail the professional work of the Medical Department and the per cent. of sick during his tour of duty. Upon these official reports all claims are based; hence the importance of properly preparing and preserving them.

All men of the Medical Department except such as are needed for the immediate care of the sick, will be instructed at the field hospital in first aid, litter drill, and the duties of the Medical Department in the field, at least five hours each week. Practical work in the field maneuvers will be considered the equivalent of such instruction.

The field hospital will be the receiving hospital for the sick and injured

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who may need hospital treatment, including all cases of infectious diseases.

Sanitary inspectors use different methods in the performance of their duties. Thus, in some camps, the inspector goes through the camp of each regiment or other unit accompanied by the regimental commander, or an officer detailed by him for that purpose. If defects are found the inspector indicates them to his companion, then and there, with a recommendation as to what corrective action should be taken. In other camps, the inspector leaves with each regimental commander, a daily sanitary report, on which is noted the percentage of excellence of the sanitation of units, and deficiencies to be corrected. Another plan followed with success is the following:

The inspector carries a notebook, *e.g.*, the field notebook of the Signal Corps or Ordnance Corps. Certain sheets (colored yellow) are perforated along the attached edge, so that they can be torn out readily. Between the perforated sheet and the one next it (colored white) is a sheet of carbon paper. Impression copies of the entries made on the first sheet are thus made on the second. The inspector enters the report of his inspection on the yellow sheet, which is left in the hands of the commanding officer of that organization to which the report pertains. This sheet, with the report of his action entered thereon, the commanding officer, within three hours, forwards to the camp commander who refers it to the camp surgeon for his information. Meanwhile the sanitary inspector turns in to the camp surgeon the book, in which the entries are made and in which the impression copies of his reports are to be found. By this device, the inspector keeps a record of his findings with the least amount of effort, while the organization commander, the camp commander and the camp surgeon are notified in turn of the findings reported and the action taken thereon.

For the information of the surgeons of units as to the details which should receive their attention, as well as for the obtainment of desired information, there has been used in some camps, a blank on which a number of items calling for report are entered. One especial element of their value is the synoptic suggestion of those points which require most consideration.

Camp of.....
Hour when inspected.
Accompanied by regimental or battalion medical officers?
Regimental medical officers well informed as to local conditions?
Have previous recommendations been carried out?
Are sanitary orderlies efficient?
Are water bags kept freshly filled and covered?
Is ground near water taps kept dry?
Is there any reason to suspect water contamination?
Type of incinerators if any?
Are flies numerous about latrines?
Errors noted in connection with latrines?
Supply of toilet paper provided?
Urine cans used nightly and cleansed?
Are latrines lighted at night?

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Are kitchens and cooks clean?
Are flies numerous about kitchen?
Is food screened from flies?
Is the food ample, of good quality and variety, and well prepared?
Are men required to wash their hands before eating?
Is garbage kept in separate covered cans?
Is the system of garbage disposal satisfactory?
Are cans on platforms?
Are cans and platforms properly cleaned and whitewashed?
Is there a company lavatory bench?
Is there a proper drainage pit beneath bench?
Is the police of the bench and surroundings satisfactory?
How is waste laundry water disposed of?
Are tent interiors orderly and clean?
Is bedding and clothing sunned daily?
Recommendations as to clothing and equipment?
Are tent walls raised daily and for how long?
Is the general police of the camp excellent?
Are sanitary inspections frequently made by the regular medical officers?
Is the dust properly abated by sprinkling? Oil or water used?
Are there any hucksters' stands in the camp?
Is the source of milk supply considered healthful?
Are picket lines clean?
Is manure removed and burned?
Is there any evidence of urination on ground?
Any other defects?

SURGEON

This form may be printed on a sheet which has a number of vertical columns ruled on the right hand side of it, beyond what is the right-hand edge as shown here. Each of these columns is marked at the top with the designation of one of the organizations inspected, *e.g.*, Band, Company A, Company B, etc. The surgeon, if he finds any of the above-mentioned items defective, in any organization, makes note to that effect on a horizontal line with the item, and in the vertical column of the organization. He sends this paper immediately after inspection to the commanding officer of the regiment, who later sends it by orderly to each subordinate organization commander concerned. These initial it in the proper space to show that they have seen the report and will correct the defects noted in their respective organizations. The paper then goes back to the adjutant who forwards it to the camp surgeon.

Sanitary Officer.—In large camps the services of the sanitary inspector are often supplemented by those of the police or sanitary officer. He may be drawn either from the Medical Department or the line, but it is highly desirable that a medical officer be assigned to this duty. Only one who has a practical knowledge of sanitation should be selected. His duties are highly important for he must aid in the correction of inconspicuous defects whose cumulative importance may make the difference between a healthy and an unhealthy camp. The sanitary officer should be responsible for sanitary conditions so far as they lie within his province, and be vested by the commanding officer in published orders with correlative authority. Also he

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should be provided with adequate personnel and equipment. The sanitary officer must supervise the daily disposal of bath, laundry and other water, garbage, police waste, human excreta, horse manure and all wastes from areas for which organization commanders are not responsible. He is immediately responsible for all sanitary conditions except the garbage burned in kitchen incinerators, excreta disposed of in company latrines, and the police camp sites of the several organizations. Defects in these last-mentioned matters are reported to him by members of a sanitary squad. These are Medical Department men who have been instructed in the methods of disposal which will be utilized in the camp and who are each given a certain area to inspect. They render daily reports upon the sanitary defects of every kitchen, water can, garbage can, incinerator, night urinal, bath house, picket line, etc., in their respective areas. The sanitary officer takes proper action on these reports and makes a daily inspection of part of each area, comparing his observation with the report received therefrom as a check against it. (Reno.)

For a camp of 5000 men, the sanitary squad should consist of: one sergeant, seven privates of the Medical Department, three carpenters, one plumber and five miscellaneous employees.

There should be but little hauling of refuse in camp other than manure. All other wastes should be destroyed in the incinerators, except bath and laundry water. Each regiment should take unburnable material daily to the dump.

Many sanitary defects in waste disposal may occur, chiefly through ignorance of proper methods, breakage of poor equipment, failure to read orders or neglect of duty. The defects reported should be consolidated, and reported at 1:00 P.M. daily, to the parties concerned.

In a paper upon instruction in the field, Munson writes in part as follows:

"The work at maneuver camps should represent culmination of the instruction given during the previous year, and in such a manner that instruction in theory, and in the formal military methods of accomplishing certain more or less disassociated medico-military results, may here find themselves coördinating on a practical basis, and vivified by assumed conditions closely approximating such as might fairly be expected to arise in war.

"It may be accepted that the average maneuver camp of the organized militia will extend over a week of six secular days. Of this short period, practically the first and last days will be occupied in detraining and entraining, and in making and breaking camp. There are four days remaining which are available for sanitary maneuvers. To secure the maximum benefit from the limited time available, it is desirable that such maneuvers as are possible should be rapidly progressive in character, so as to exemplify the more important phases of sanitary work extending from the smaller up to the larger tactical units. To refresh the memories of the better instructed, and to give the newer personnel a better understanding of the work which is to come, a series of lectures should be delivered giving a full, theoretical explanation of the general purposes and methods which are about

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to be specifically applied in practice in individual concrete cases. Thus a discussion of sanitary work with a battalion, on Monday afternoon, should be followed on Tuesday morning by a battalion sanitary problem; an explanation, on Tuesday afternoon, of the sanitary service with a regiment should be followed on Wednesday morning by sanitary maneuvers based on such combatant organizations; a discussion of ambulance companies and stations for slightly wounded, held Wednesday afternoon, should precede the field problem of Thursday morning, covering the primary and secondary lines of sanitary relief with the brigade; a conference on field hospitals and sanitary supplies, held Thursday afternoon, should prepare the way for a problem, on Friday morning, covering all the establishments for sanitary relief from the firing line to the advanced base. If the limited number of sanitary troops or other considerations render the carrying out of the above scheme impracticable, simpler problems relating to smaller units can be substituted for the two last suggested.

"Practical work in sanitary maneuvers, in the large majority of cases, is carried out best by sanitary troops alone, but this is rarely feasible. Where they are attached to combatant troops in general problems, it usually results, in practice, that when the tactical problem is solved 'recall' sounds and the combatant troops start back for camp and dinner about the time that the work of value to the sanitary service should logically begin. Some commanders of combatant organizations are desirous of having their medical officers and Medical Department men present at all the field exercises of their commands, under the idea of having plenty of assistance available in the improbable contingency that serious accidents occur. This idea should be catered to only to the extent of sending a medical officer and ambulance out with a regiment, for time spent by sanitary troops under such conditions is practically wasted, so far as their own instruction in field work is concerned.

"In the latter stages of sanitary training, however, sanitary troops should accompany the appropriate combatant organizations; but under such conditions it should be distinctly understood in advance that the problem to be solved is a joint one, and it should be planned in advance, as can be done without any detriment to the tactical situation, so as to bring the functions of all concerned into play. For example, it is quite possible to have the last problem of the week one of occupancy of a defensive position, in which after the troops are in place, the command 'commence firing' gives the signal to the Medical Department to begin work, and in which for a reasonable period, say an hour and a half, tagged 'wounded' are successively dropped out along the lines, dressed, collected, and evacuated back to camp in an appropriate way. Assumption that the enemy has then been repulsed would conclude the problem. Such problems as the latter would not only afford joint training but would be valuable as demonstrating to officers and men of the line the methods of sanitary field service, together with its actual efficiency in caring for them, should they be injured.

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"At the outset of the series, the problems should not be too difficult. The medical officer designated as battalion surgeon is able to do a large part of the first aid and relief work himself, assisted by his orderly, one sergeant and four privates.

"Solutions of the problems attending regimental medical service are usually characterized by a number of omissions, or other mistakes, and when ambulance companies or field hospitals are utilized, in more complex situations, these are increased in frequency and importance.

"For this administrative shortcoming nothing but actual field work along the lines here outlined can furnish the remedy. Only practice in the handling of scattered but coördinated sanitary groups will bring about successful accomplishment of the results required.

"The preparation of suitable sanitary problems is not an easy task, but is by no means beyond the capacity of specially qualified medical officers. Every sanitary problem must have a basis on a tactical situation. The latter may be specially planned to illustrate any particular feature of sanitary methods and tactics desired; on which to base a further inquiry in respect to the coördinate sanitary tactics necessary. This latter form of problem is often of great value and requires least thought and study for preparation. It is not always easy, however, to find tactical problems at hand which will meet fully the needs of the sanitary officer desirous of formulating a graded or progressive course in the special tactics of his own service. In conjoint field maneuvers with combatant troops, the sanitary service will usually have to accept for its own work the tactical problems presented to the command as a whole; though, as elsewhere mentioned, these can often be modified in the interest of the sanitary service with no detriment to the general situation concerned.

"The preparation of special sanitary problems should postulate a certain knowledge of the elements of general tactics. It is quite true that whether the tactical management of troops be good or bad, the sanitary service must follow the part the commanders play; but problems for medical officers should possess the dual purpose of endeavoring to teach good general as well as good sanitary tactics. Usually competent line officers can be found to advise in this matter.

"In the general consideration of the formulation of problems there are only a few main dispositions of troops upon which accessory disposition of the sanitary troops need be made. In general terms, these are advance guard formation, attack, rear guard formation, and occupation of a defensive position. Success and defeat, partial or complete, bring their special conditions. All the rest depends upon the coördinating factors of size, character and disposition of troops, terrain, routes of evacuation, character of roads, length of line of communications, quality of service of communications, climate, season, weather, physical state of troops, the limit available and similar modifying conditions. Some or all of these factors must appear in the construction of all problems.

"In planning a series of problems, care must be taken that they do not cause undue repetition of similar situations.

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"In respect to the details necessary to the proper preparation of special problems, the following points should receive consideration:

"1. The problem should possess a semblance of reality. It should be a situation which might naturally arise in a state of war.

"2. It should be as simple and brief as possible. Complicated and involved statements are generally unnatural and are fruitful sources of misunderstanding.

"3. It should advantageously illustrate the principle or principles of sanitary tactics, concerning which special study is desired. The solution of a problem is a lesson.

"4. It must be made as instructive as possible. This means the leaving to the officers participating, as many of the decisions as the time allows, and as much latitude as may be necessary to force them into positions where they must exercise their own judgment and skill.

"5. It should be adapted to the number and character of the troops assumed to be involved. Abnormal sanitary situations are the exception and not the rule.

"6. It should contain only such information as the commander of the troops, or his sanitary subordinates specially concerned, might be supposed to possess. The proper employment of the resources of the sanitary service as an accessory means of procuring and transmitting sanitary information is one of the most important lessons for the medical officer to learn.

"7. If contact with the enemy is assumed to have resulted, this should be on ground which is tactically permissible. It is highly undesirable, with terrain more naturally adapted to military operations in the immediate vicinity, to stage a battle with its consequent sanitary activity on ground over which the commanders would not naturally elect to fight.

"8. It should introduce as few unnatural conditions as possible. The desirability of this is apparent, since one of the chief functions of sanitary tactics is to teach medical officers how properly to judge and utilize ground, either as represented by maps or by the terrain itself.

"9. It must include the disposition of the troops and sanitary personnel upon whom the problem and its solution depends. The reason for this is obvious.

"10. It can often be made progressive, new situations being unfolded at suitable intervals. This teaches not only quick decision, but willingness to promptly abandon preconceived ideas as actual developments may demand it.

"Specific information as to how to prepare special sanitary problems cannot be given, since no two medical officers would probably go about such a task in the same way. But it is well to first gain a clear idea of what is to be illustrated, and how, in general terms, this should be done. Next the map and the ground should be studied to find terrain well adapted to the purpose. Then the combatant troops are located thereon in such a way as best to illustrate the principle. A hypothesis is then assumed in a way to make the above situation occur naturally and in a manner and

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under circumstances likely to occur in war. The whole is then checked up in detail, to see that each factor coördinates with the rest in fulfilling the general conditions assumed. Finally, the requirements of the problem, for the solution of which the assumed conditions furnish the necessary data, are set forth in as few words as possible.

"A good military map of the maneuver ground is as essential to the work of the sanitary service as that of any other part of the military forces. The larger the scale of this map, the better. Such a map will not only greatly facilitate the preparation of problems by the director of problems, but will materially assist in their proper solution by those concerned.

"Permanent maneuver grounds have usually been well mapped. Maps of new or temporary maneuver grounds can usually be obtained through the engineer forces of the State, or other qualified officers, as a result of proper representation to the adjutant general of the State. In the great majority of cases government maps of the area concerned can be obtained from the U. S. Geological Survey, Washington, D. C. The maps of county surveys, or even automobile road maps, will often be obtainable and of service where military maps are not available. It is not necessary for the purposes of the Medical Department that a very large area should be mapped. If the terrain be well suited to military operations, the mapping of a few square miles should be quite sufficient for a week of maneuvers and problems, assuming forces as large as a reinforced brigade.

"No sanitary problem should be given out in advance of the actual arrival of the sanitary command on the field. The tactical situation assumed, as for example, with a planned defense, might in some cases legitimately be given out the night before, thereby permitting of certain general sanitary plans and preparations; but the special sanitary situation should be developed with little warning, as would be the case in actual war. This implies a valuable practice by the medical officers assigned to solve the problem, not only in the rendering of suitable decisions and orders, but in rendering them under the stimulus and difficulties of immediate necessity. To further this latter end, it is desirable to formulate some problems in such a way that the medical officer concerned be given a fixed period, of say three to five minutes, in which he must reach and announce his decision and plans and issue instructions and orders.

"A most important feature of field sanitary work which should not be overlooked, and which the relatively small number and usual high degree of intelligence of sanitary troops permits of being readily carried out, consists in fully informing all enlisted men as to the nature of the field problems propounded for solution. Too often the soldier is entirely ignored in such matters, with the result that field work is meaningless to him other than as it implies much apparently purposeless marching and hard and disagreeable labor.

"When a situation is changed, the soldier should be given such further information as the chief umpire gives out for general knowledge relative to the new or progressive change in affairs.

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"While ultimately all medical officers should be given personal practice in the solution of field sanitary problems, it is very desirable, at the beginning of such work, that such as are best equipped to do justice to the subject should receive the assignments to the earlier problems. The fact should not be overlooked that the participants, while improving themselves in field duties, are also demonstrators of principles and methods to their confrères occupying the position of observers. The making of ordinary mistakes is not only to be expected but is valuable, as illustrating methods and matters to avoid; but marked incapacity on the part of participant officers is ruinous to the problem of the day, destructive of the informations that otherwise might have been derived therefrom, and calculated to provoke disgust and ridicule among all concerned.

"Observers should not be content to act as simple witnesses of a medico-military spectacle, but should enter into it by thinking out for themselves, in advance and independently of any moves made on the field, such course of action as they would have instituted had they themselves been responsible for the solution of the problem in question.

"The sanitary detachments and organizations participating in sanitary maneuver problems should, where practicable, be brought up to full war strength for the purpose. To attempt to solve a problem based on the theoretical war maximum with a sanitary personnel actually deficient numerically or at the peace minimum will invite misapprehension.

"A medical officer, specially qualified for such work, should be detailed as chief medical umpire or director of problems for the maneuver period. He should have such assistants as may be necessary. His duties include the preparation of the problems such as are found in Munson's 'Sanitary Tactics;' requests to the camp surgeon for the assignment of the necessary personnel, transportation and material at the time and place required; the general direction of all matters preliminary to the actual solution of the problem; and final decision as umpire in doubtful or disputed points arising during the solution of the problem.

"Medical officers should be successively detailed to serve as recorder of the problem of the day. The recorder makes a written note of all happenings which bear on the proper solution of the problem, either falling under his own observation or reported to him by others. The time at which each and every movement is begun and the period required for its accomplishment; all orders, messages and reports, all mistakes, misunderstandings and delays, and similar matters, should be carefully set down by him at the time and summarized at the evening lyceum in an impartial statement of fact upon which discussion of the problems should be based.

"The camp surgeon sees that the organizations, personnel, equipment and transportation requested by the director of problems for use in connection with the problem of the day are given suitable orders to reach the designated point or points at the time required. With or without conference with the director of problems, he makes timely assignment of officers for participation in the solution of the problem of the day. He sees that sufficient diag-

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nosis tags are properly made out for each problem. He is responsible for the confidential preparation of a sufficient number of copies of each problem from the draft of the same furnished him by the director of problems, and he provides for the distribution of such copies at the proper time. He places all portions of his command actually on the terrain in the problem of the day under the direct temporary control of the director of problems and the officers detailed as participants under him.

"On reaching the terrain employed in the problem, one or more officers are placed in charge of the 'wounded.' The latter are not to be allowed to fall out promiscuously and at haphazard, but their proper distribution on the battlefield should be directly accomplished by the medical officers as above detailed. The director of problems will know the assumed conditions of arms, military forces, distances, terrain, etc., and he can either give a map to the distributing officers showing where, and in what numbers, 'wounded' should be dropped out, or he can point out these areas on the terrain itself. Under these precautions 'wounded' will be found in the areas in which they would naturally fall in battle over the same terrain, and a valuable tactical lesson will be illustrated.

"'Wounded' should, as far as possible, be drawn from the Medical Department personnel not required as participants in the solution of the problem. As larger problems are reached and more wounded have to be handled, other sources must be drawn upon. These are first found in the bands, which are rarely required to accompany their regimental organizations in field problems. Finally, entire combatant organizations may be detailed to this work; but in combined problems, the proper proportion of each organization participating is made to fall out under prearranged conditions of time and place.

"Where the nature, scope and purpose of such problems is fully explained to line officers commanding, the full coöperation and assistance of the latter will rarely be withheld.

"It is of the greatest importance to the success of the sanitary service in war that line officers not only appreciate the purposes of the Medical Department, but understand the methods by which it attempts to secure the accomplishment of the necessary results.

"The diagnosis tags to be used in tagging 'wounded' should be of the latest improved type.

"In the interest of realism, it is important that the supposititious injuries to be treated should closely resemble, in number, character and regional proportion, those which would be encountered in actual war. An analysis of some 7000 cases reaching field hospitals gave the following regional percentage distribution:

Wounds of the head and neck	30
Wounds of trunk	40
Wounds of upper extremities	18
Wounds of lower extremities	12

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"The above general distribution should be further divided under some twenty-five or thirty specific diagnoses, each written on a diagnosis tag in the form and with such brief clinical description as is required under the Manual for the Medical Department.

"Of wounds of the upper and lower extremities about 22 per cent. should be assumed to be fractures.

"With regard to the classification of maneuver 'casualties,' we assume no 'dead,' who would normally be disregarded, but all that are assumed as hit are 'wounded.' For purposes of collection and transportation, we may roughly assume that the proportions needing recumbent transport, sitting transport or able to walk, as given in the chapter on "Evacuation of Wounded" are approved. To prevent confusion on the field, so that cases whose supposititious injuries are of such character as would preclude their walking may not be sent in on foot, each diagnosis tag is made to indicate whether transportation should be given or not and the diagnosis thereon is made to conform accordingly. It is evident, therefore, that the preparation of diagnosis tags requires care and should be entrusted to experienced medical officers only.

"The number of persons to be tagged should be determined by the terms of the problem for the day. Ten per cent. is taken because that amount of casualty is about the limit of what all but a veteran soldiery can be expected to sustain and still maintain its formation and a fighting efficiency. The dressings to be used in this field work should be strictly limited to those included in the first-aid packet or those carried in the belt of the sanitary soldier. Splints may be extemporized. Only the latest first-aid packets should be employed, and these should be expended without hesitancy.

"To avoid too hasty and careless work in the dressing of injuries by the sanitary troops, which would likewise tend to impair the value of the time factor arrived at in the solution of any problem, notice should be given in advance that the suitability and permanency of such dressings will be checked up by boards of medical officers detailed to take station and act at the various collecting points. The procedure required should be about as follows:

"After dressing the injury in accordance with the diagnosis entered on the diagnosis tag, the officer or sanitary soldier who handled the case must sign his name in the proper place on the tag. The medical board examining the dressing on arrival of the case at a collecting point will note on the back of the tag, in detail, any errors or defects in the character or application of the dressing. The tags and dressings are then removed from the 'wounded'; the tags being preserved until the conclusion of the problem, when they are turned in to the chief medical umpire, who can, by a few moments examination of them, determine exactly the relative proportion of cases which have been properly and improperly dressed, thereby arriving at fairly accurate estimate of the state of efficiency in first-aid work of the sanitary troops engaged. He then turns these tags over to the senior surgeon of the sanitary troops concerned, and through the office of the

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latter they are distributed, on the basis of the signatures of those giving the first aid entered on them, to the medical officers commanding or responsible for the instruction of the enlisted participants in the problem. The latter medical officers, at the conclusion of each problem and also the maneuvers as a whole, are thus in the possession of a large amount of official data regarding the first-aid proficiency of their commands, both as a whole and in their individual constituents. The tags tell not only the names of the men whose work was found unsatisfactory, but the conditions improperly handled, and not only show the individuals whose first-aid training will need further attention, after return of the command to its armory, but point out the character of the further instruction which they require.

"A fundamentally important feature connected with the solution of a sanitary problem consists in the discussion which should follow it, in which comment and friendly criticism by all medical officers in attendance on the problem should be encouraged. It is not possible that these discussions can be made entirely impersonal, for all know who is responsible for action which may be alluded to in discussion as ill-judged or erroneous. But if all are informed at the outset of the maneuvers that the action of all participants is to be subject to such discussion, and that any trifling embarrassment, to those who in rapid rotation are for brief periods charged with the handling of sanitary troops, cannot be permitted to stand in the way of a better solution of the problems in the minds of all concerned, there is little likelihood of serious detriment to the feelings and dignity of participants.

"These discussions are valuable because they afford excellent opportunity for the correction of misapprehension or error on the part of those taking part in the discussion. The best time to hold these discussions is probably in the evening, as a sort of a 'camp fire lyceum,' when the conditions and the actions of the day are fresh in the mind yet there has been sufficient opportunity for later reflection thereon."

As a rule, didactic lectures, except in so far as they can be applied immediately in field work, should be avoided. Lecturers consider subjects which can often be learned as well or better from a book than from a lecturer. The time in camp can be used to best advantage if devoted largely to those subjects which cannot be learned elsewhere, especially discussion of problems worked out on the terrain or on maps and demonstrations of sanitary appliances and devices. For this reason staff rides and tactical problems in the field are particularly valuable. Also for purposes of demonstration there should be provided at the field hospital one of each of those devices or sanitary appliances which may prove of service in the field, and demonstrations should be given of the manner in which they are operated. Arrangements should be made whereby these can be demonstrated to the line officers in camp as well as the sanitary personnel.

The following was published in the El Paso District in 1916 for guidance in protracted maneuvers.

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The number of animals, draft, pack, and riding, public and private, which should be taken by each unit or detachment will be reported by the commander thereof, in writing, to the quartermaster of the division, not less than forty-eight hours prior to beginning the march.

Commanders of sanitary organizations and detachments will see that their men are properly supplied with serviceable shoes and clothing before beginning the march.

Straggling on the march or at maneuvers is strictly prohibited. No personnel, other than the drivers, orderlies, disabled and cooks, will ride upon the ambulances or wagons.

Officers and noncommissioned officers will see that this order is enforced.

Commanders of sanitary units will see that their trains are kept closed up and that drivers are alert at all times.

The senior medical officer with each regimental sanitary detachment will take the pack mule and combat equipment of his regiment on the maneuvers. He will be responsible for the proper equipment of the officers and men of his provisional sanitary detachment.

In solving problems, the sanitary combat equipment carried on the combat wagons will not be available and must be disregarded in practice, but it will be referred to when necessary in orders, calculations, etc.

Any dressing or splinting material carried by the soldier, either in the first-aid pouch or in the hospital pouch or belt, may be used for demonstration purposes.

While the dressing should be adequate, there should be no waste of material, and any unused parts of bandages and dressings saved for further work.

Splinting should largely be done with improvised materials found in the field, as might be the case in actual war.

Surplus dressings, bandages, first-aid packets, shell-wound dressings, and diagnosis tags, for use in maneuver work, will be carried on combat wagons and issued as required.

Litters pertaining to the regimental sanitary detachments will habitually be carried by the personnel of such detachments.

Medical maneuvers are primarily intended to exemplify the tactical use of the sanitary organization and personnel and demonstrate methods of operation.

The tactical problems to be solved will include those proper to commands of all sizes and arms up to, and including the division. They will demonstrate the sanitary service in positions of readiness, planned defense, attack, retreat and the rencounter. One or more problems will be carried out at night.

An important point to be determined by these maneuvers is the time required to clear the field. In some of the problems, the time factor will be made to dominate.

Cases able to walk with or without assistance will be evacuated in that

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manner. Cases requiring litter transportation will be removed on litters. Charges will be preferred against any soldier who permits a transportation case to walk. Litter bearers who are tired may rest, as they would in actual campaign, and those who report themselves as exhausted may be excused from further bearer work.

The maneuvers are also intended to test out the professional efficiency of the enlisted men of the Medical Department in the dressing of wounds and the treatment of fractures. It is expected that they will do most of the actual dressing work, either with or without the supervision of a medical officer.

The leader of each squad handling a case will write his name, rank and organization on the diagnosis tag of each such case. The first dressings, splints, etc. of such case will be critically examined by a medical board at each relief station, and the latter will endorse its approval or criticism, with specifications in the latter case, on the diagnosis tag. At the conclusion of each day's maneuver, the diagnosis tags thus endorsed will be turned in to the division surgeon, who will transmit them to the commanders of the enlisted men by whom the dressings were applied.

Commanders will be thus informed of the proficiency, or otherwise, of their individual men in first aid, and will have pointed out to them the defects in the training of each man which should be rectified. This information should be the basis of further individual training of the enlisted men of the Medical Department found not proficient in any respects.

Splints to be put on will be of proper sufficiency, size and shape, and will be suitably padded. Dressings will be properly located and of adequate size for wound protection. Bandages will be sufficient in size and amount to meet the needs of the injury. They will be put on smoothly, evenly, and sufficiently tight to retain dressings properly and give suitable support to broken bones.

It is desired to have all splints and dressings applied exactly as they would be if the hypothetical injuries were real. The only exceptions are that bandages and splints may be applied over the outer clothing, and that *tourniquets, when in position, will not be tightened sufficiently to interfere with circulation and cause pain.* The opening and application of dressings will be done aseptically.

Original diagnosis tags, filled out so far as the diagnosis is concerned, will be prepared in advance and issued from camp headquarters as required for the solution of problems.

The additional information required to complete the tags will be entered thereon by those handling the cases tagged.

Original and duplicate tags will be disposed of as required by Manual Medical Department, 1916.

Lists of sick and wounded contemplated by Pars. 575, 576, 577, 579 and and 586, Manual Medical Department, 1916, will be prepared on Form 53, as part of the work required in the solution of problems.

Field hospitals will make out transfer list for all cases tagged with

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injuries appropriate for transfer to the line of communications, as required by Par. 583, Manual Medical Department, 1916.

The course of instruction should be flexible to a degree, *i.e.*, hard and fast lines for all events should not be decided upon some weeks beforehand. It is well to preserve to the scheme of instruction a certain latitude and adaptability which will make allowance for unforseen contingencies, especially for deficiencies on the part of the troops, unfavorable weather for a given demonstration of problem, etc. Hypothetical copies of blank forms should be made out covering as many technicalities as possible, and these should be explained fully in detail.

Schedules of instruction such as the following may be used.

MEDICAL OFFICERS

August	8–9 : 00 A.M.	9–10 : 00 A.M.	10–11 : 00 A.M.	2 : 30–4 : 00 P.M.	4 : 00 P.M.
11–22	Service and instruction in the several units.				
12–23	Drill Reg. San. Troops	Sanitation, general view	The Sanitary Officer and the sanitary squad	Campaign, general view	Lecture and discussion, the sanitary soldier
13–24	Drill Reg. San. Troops	Stationary Hospital, general view, interior economy	The Sanitary Inspector	Functions, medical relief of the front	Organisation, etc., of medical field units
15–25	Drill Reg. San. Troops	Stationary Hospital, property and records, management dispensary and wards	Practical inspection	Functions of the lines of communication and the base	The Medical Department in campaign, duties of administrative officer
16–26	Drill Reg. San. Troops	Ambulance Co., interior economy	Administration, general view	Evacuation and return of the wounded	Recruitment, etc., of the Medical Department of a regiment of volunteers for war service
17–27	Dressing Station and Ambulance Co.	Military correspondence and reports	Practical inspection	Means of transportation	The diseases of the soldier
18–29	Staff ride	Staff ride	Staff ride	Staff ride	Staff ride
19–30	Combined maneuvers	Combined maneuvers	Combined maneuvers	Combined maneuvers	Combined maneuvers

Officers of the Medical Corps, U. S. Army, detailed for duty at the camp should be detailed as instructors specifically for the subjects considered.

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ENLISTED MEN MEDICAL DEPARTMENT

August	8–9 A. M.	9–10 A. M.	10–11 A. M.	2:30–4 P. M.
11–22	Service and instruction in the several units	Service and instruction in the several units	Service and instruction in the several units	Service and instruction in the several units
12–23	Drill Reg. San. Troops	Sanitation, general view	The Sanitary Officer and the sanitary squad	Service in the several units
13–24	Drill Reg. San. Troops	Stationary Hospital, general view, including interior economy	Practical work	Service in the several units
15–25	Drill Reg. San. Troops	Stationary Hospital, records, etc.	Practical work	Service in the several units
16–26	Drill Reg. San. Troops	Ambulance Co., interior economy	First-aid Station	Service in the several units
17–27	Dressing Station and Ambulance Co.	Ambulance Dressing Station	First-aid Station	Service in the several units
18–29	Field Hospital, evacuation to rear	Field Hospital, pitching and striking	Police of the battlefield	Service in the several units
19–30		Combined maneuvers		

Officers of the Medical Corps, U. S. Army, detailed for duty at the camp should be designated specifically as instructors in the several subjects.

For the instruction of the sanitary troops drills are conducted, demonstrations of sanitary appliances given, and instructions given in first aid. They also participate in maneuvers, which are fully explained to them. The drills of the militia are best given in association with members of the Medical Department of the U. S. Army, or, after demonstration of a movement is given by these latter, it should be repeated by the former. So far as practicable, the sanitary troops attached to organizations of the militia should be assigned to duty at the field hospital. They may absorb much from mere association and environment. Mimeograph copies of notes on first aid are of interest to the newly enlisted members of the Medical Department. The men themselves should demonstrate the points (concerning first aid) mentioned.

The following is an excerpt from the instructions for the government of the Medical Officers Training Camps, established in 1917. It itemizes the studies to be pursued and by the hours devoted to each indicates their relative importance to newly commissioned medical officers.

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Schedule for the first month:

A.M.	
6:00	Reveille.
6:15–6:30	Setting up.
6:35–7:25	Breakfast. Police of quarters.
7:30–8:25	Drill (marching).
8:30–9:25	Drill (special).
9:30–10:25	Quiz or lecture.
10:30–11:25	Quiz or lecture.
11:30–12:55	Dinner, Rest, etc.
P.M.	
1:00–1:55	Quiz or lecture.
2:00–2:55	Quiz or lecture.
3:00–4:25	Equitation.
4:30–5:55	Care of animals, supper, rest, etc.
6:00	Retreat.

"On this general plan, 180 hours of formal instruction will be given monthly. No evening exercises are contemplated. Time will be needed for study. Saturday afternoon should be a rest period. Officers should be encouraged in equitation on Sunday, preferably in form of tactical ride. The schedule for the third month will vary materially from above, due to the practical field sanitary problems contemplated, and the fact that at least one full half day is ordinarily needed for each. This provides for a total course of 540 hours of instruction.

"The following scheme shows the proposed scope and distribution of training of medical officers during the first period of one month of thirty days.

	Hours
Setting up (fifteen minutes daily for twenty-six days)	6.5
Drills (marching, litter, ambulance, other means of transport)	52.0
Inspections	4.0
Equitation, bridling, saddling, care of animals, etc.	33.0
Tent pitching, shelter tent	2.0
Tent pitching, pyramidal tent	2.0
Personal equipment of the sanitary soldier	1.0
Field and surplus kits	1.0
Care and maintenance of soldier's equipment	2.0
First aid, using soldier's equipment only	2.0
Examination of recruits, with papers and finger prints	8.0
Nature and employment of regimental medical supplies	8.0
Customs of the service	2.0
Duties of the soldier	4.0
Relation of Medical Department to rest of Army	1.0
General organization of Medical Department for war	4.0
Army Regulations	12.0
General organization of military forces	2.0
Manual for the Medical Department	12.0
Military hygiene and sanitation	6.0
Field Service Regulations	6.0
Paper work, relating to the Medical Department	4.0
Map reading, use of compass, orientation, etc.	6.0
	180.0

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The following scheme shows the scope and distribution of training of medical officers during the second period of one month of thirty days.

	Hours
Setting up (fifteen minutes daily for twenty-six days)	26.5
Drills, marching	6.0
Inspections	34.0
Equitation, and care of animals	3.0
Tent pitching, hospital tentage	4.0
Elementary road and position sketching	4.0
The regimental detachment, its use and internal administration	8.0
The ambulance company, its equipment, use and internal administration	8.0
The field hospital its equipment, use and internal administration	8.0
The tactical use of infantry (lecture by line officer)	1.0
The tactical use of cavalry (lecture by line officer)	1.0
The tactical use of field artillery (lecture by line officer)	1.0
The use of the Engineer and Signal Corps (lecture by line officer.)	1.0
The service and mechanism of supply in the field (lecture by quartermaster)	1.0
Paper work, relating to the Medical Department	12.0
Paper work, relating to the Quartermaster's Department	4.0
Paper work, relating to the Ordnance Department	2.0
The Medical Department in campaign	8.0
The principles of sanitary tactics	8.0
Map problem	4.0
War games	8.0
Military hygiene and sanitation	12.0
Army Regulations	6.0
Manual for the Medical Department	6.0
Lectures on special subjects	4.0
	180.0

The following scheme shows the scope and distribution of training of medical officers during the third period of one month of thirty days.

	Hours
Setting up (15 minutes daily for 26 days)	6.5
Drills (service as drill master in drills of diverse nature)	26.0
Inspections	4.0
Equitation	15.0
Handling of rations and mess management	2.0
Manual for Courts-Martial and Military Law	8.0
The Articles of War	1.0
The Geneva and Hague Conventions	1.0
The rules of land warfare	1.0
Military surgery	8.0
Poison gases, protection against, symptoms and treatment (Demonstrations), liquid fire	2.0
War psychoses and neuroses; shell shock; malingering	3.0
Trench warfare; "trench foot"	1.0
Demonstration of trench system, including bomb proofs, dugouts, entanglements, abattis, etc	1.0
Cantonment hospitals, organization and management of	2.0
The sanitary service, line of communications	1.0

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Hospital ships, ships for patients; hospital trains, trains for patients.	2.0
Base hospitals, their organization and management	1.0
General hospitals, their organization and management	1.0
Contagious disease hospitals; casual camps; convalescent camps; camps for prisoners of war	1.0
Organization, functions and limitations of the American Red Cross	1.0
The civil sanitary function of the Army Medical Department in occupied territory	1.0
War games	2.0
Tactical rides	6.0
Sanitary inspections, practical demonstrations of methods of	4.0
Practice march and bivouac (2 days)	15.0
Practical field maneuvers, including brigade and divisional problems, with two night problems, and utilizing regimental detachments, ambulance companies, field hospitals, stations for slightly wounded, etc., in coördination. Problems will include the attack, retreat, planned defense and rencounter, with all arms	60.0
Lectures on special subjects	4.0
	180.0

NOTE.—For the proper conduction of the large medical maneuvers contemplated during this period, the services of a company or battalion of the Signal Corps are desirable. The duties assigned to them, however, are such as pertain to their normal functions and training. When line troops are available, the above problems should be carried out with them, as part of their training as well as that of the sanitary personnel.

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CHAPTER XIV

THE SANITARY SERVICE OF POSTS

The duties of medical officers serving at posts may be classified as those extrinsic and those intrinsic to the hospital. Extrinsic duties include sanitary inspections, instruction of the command in sanitation and first aid, professional visits, obtainment of knowledge of the health conditions in local civil communities, service on courts-martial, examining boards, post exchange councils, etc., and attendance on military functions.

General sanitary inspections are made monthly and as much more frequently as circumstances indicate. Thus, in the presence of epidemics such as measles, malaria, typhoid fever, etc., inspections must be made frequently, attention being given especially to the possible sources of infection.

In order to formulate a monthly sanitary report of value, the medical officer must acquaint himself thoroughly with hygiene and sanitation. He should make numerous observations and not depend on one inspection only for his conclusions. Thus, he must have noted any deficiencies in clothing which he has seen, the character and quantity of the food served, as evidenced both by inspection of the mess of the various organizations and by the bills of fare of some meals not inspected by him. For detection of defects in barracks and quarters he should supplement his own observations by examining the repair book in the quartermaster's office. The average air space per capita in the squad rooms should be computed. These inspections to be of value, and not merely perfunctory, require that the medical officer must cultivate the coöperation of line officers. These latter are sometimes disposed to resent what they may regard an intrusion into their own particular sphere of duty and to oppose the efforts of the medical officer. The medical officer must make it apparent that his inspections are not made in a spirit of captious criticism but are intended to be of constructive value, and advantageous to the command. He should before making the inspection learn if the commanding officer of the company is available and express to him his desire to inspect the premises. If not accompanied by one of the officers of the unit he should ask in the orderly room that some company noncommissioned officer accompany him. Defects noted should not be discussed with the enlisted personnel but with the commanding officers of the company and post.

The inspection made on the last day of the month is of importance chiefly as a military formality and as a means of determining the highest degree of cleanliness and presentability that an organization can attain. As a means of determining its average condition, such an inspection is deceptive and is therefore, for this purpose, worse than useless.

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When an infectious disease appears in a post, the surgeon must attempt to discover its source and to eradicate it. He should have familiarized himself with appropriate works on hygiene and sanitation, *e.g.*, Rosenau, "Preventive Medicine;" Havard's or Ashburn's "Military Hygiene," etc.

Venereal diseases ordinarily are a more common cause of disability than any others. They are especially prevalent among armies in the European war areas and are increasing.

Prophylactic units are issued on requisition to posts and regiments. For administering prophylaxis the following rules are of value:

A suitable, easily accessible room in the hospital (or dispensary) at each post should be selected for this purpose, which should be provided with a good light and such medical supplies, basins, and other equipment as may be necessary. A competent, properly instructed man of the Medical Department, or more when necessary, will be on duty there between retreat and reveille, and will be within call at other hours.

The procedure in the case of men reporting for treatment will be as follows:

1. The name, rank, and organization of the soldier, with the day and hour of treatment should be entered for record on a card furnished for the purpose, which will afterwards be examined and authenticated by the initials of a medical officer. These records should be regarded as confidential and should be kept in a secure place and not shown to unauthorized persons except upon proper authority. They will not be preserved longer than three months.

2. The genital organs will be thoroughly washed with soap and warm water.

3. An injection will be made into the urethra of 4 c.c. of the standard solution of 2 per cent. protargol dissolved in glycerin 15 parts, water 85 parts. This should be retained in the urethra for three minutes. If in individual cases the protargol solution is found to produce an irritating effect, a 20 per cent. solution of argyrol may be used. Other solutions or modifications of these solutions should not be used for routine administration.

4. The entire penis should be rubbed with calomel ointment (30 per cent., in benzoinated lard), care being taken that the folds of the prepuce and about the frenum are thoroughly covered. If any pimples or abrasions exist about the scrotum or the pubic region, these should also receive an application of the ointment.

The parts should then be wrapped in a napkin of soft paper furnished for the purpose, in order to protect the clothing.

A medical officer may for special reasons use other preparations than those above specified but only when he personally gives or supervises the administration of them. Report should be made in such cases of such drugs used and the results obtained, with reasons for departure from the routine treatment.

Among the measures which have been found most successful in various services in controlling venereal diseases have been the following:

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1. The organization of soldier's clubs, canteens and other institutions whereby enlisted men can find amusement and recreation (especially athletics), sufficiently attractive to keep them at home and away from vile resorts.

2. Stoppage of pay for enlisted men for all the time they are unfit for duty because of their own misconduct. This measure has had a pronounced effect in our service.

3. The early detection of all cases of venereal diseases by physical examinations at unexpected times, twice a month, of the men stripped.

4. Keeping all cases of venereal disease under continuous observation and treatment until they are cured. For this purpose venereal registers are kept, and a case once on the books is never lost sight of until cured. Should a man be transferred while under treatment to another post or station, his venereal history goes with him.

5. Instruction of the men by lectures, by brief printed circulars, and by informal advice whenever the opportunity offers concerning the physiology of the sexual organs, the nature of venereal diseases, the extent of their prevalence among prostitutes, and the grave peril not only to those who contract them, but to their families and posterity. They should also be taught that sexual intercourse is not necessary to good health and the highest degree of mental and physical vigor.

6. Instruction in measures of personal prophylaxis for those who will, contrary to advice, expose themselves to venereal infection. All the principal European armies as well as ours have officially authorized or directed the use of such prophylactic measures, and a considerable degree of success has attended their use. In some of the Austrian garrisons this system is said to have effected a decrease of 62 per cent. in the cases of venereal diseases. In the German Army equally good results have been reported. The general procedure in all armies is about the same, though there are slight differences in the details, especially in regard to the particular antiseptic employed.

7. Official encouragement of temperance, *i.e.*, total abstinence societies. The sale of liquor by civilians to soldiers in uniform is now prohibited by Federal Statute.

The following is a copy of a circular that may be distributed to advantage.

READ AND REFLECT

1. To have sexual relations with any woman who practices prostitution exposes you to very painful and life-endangering diseases of long standing, which may be transmitted to your future wife and children, rendering them mentally and physically defective.

2. A prostitute presenting a physician's certificate of health proves thereby only that she was in health when examined. She may have contracted a dangerous disease a few minutes after the examination.

3. The mouth secretion in such women is often capable of transmitting

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disease; hence kissing, or the use of a cup or glass, spoon, fork, etc., which may not have been thoroughly cleansed after being used by a prostitute, may transmit syphilis with its destroying consequences.

4. The fact that a prostitute appears clean and free from the signs of disease does not prove her so. The absence can be established only by a medical examination.

5. If, despite these facts, you will risk health and life, you must endeavor to protect yourself and those about you by a simple treatment to be obtained upon application at the hospital, and used as soon as possible after returning from absence on pass. No man who has been exposed to venereal infection should neglect to seek promptly the treatment to be obtained at the hospital upon return from leave. The concealment of a venereal disease lays you open to severe punishment.

It has been found as in the similar question of typhoid prophylaxis, that success or failure of measures taken to control the prevalence of venereal disease, depended not only upon the zeal and enthusiasm of the surgeon, but upon his success in arousing the interest and securing the coöperation of the commanding officer. See G.O. 17 and 31, W.D., 1912. G.O. 13, 1913. Bull. 43, 1915. G.O. 45, 1914.

The ethical propriety of using methods of personal venereal prophylaxis has been questioned in some quarters. It is interesting to note that those who oppose such methods follow much the same line of argument as did those who, in a former generation, opposed the use of anesthetics. They are those who find a (perhaps subconscious) pleasure in the suffering of mankind, when caused by his weakness or folly, and who on the plea that pain is caused by sin, seek to justify the withholding of the means of preventing suffering; an attitude quite as cruel though not so active as the deliberate causation of pain.

"Objection has been made by certain theorists that steps taken to reduce the dangers of illicit intercourse will, by removing the restraining influences of fear of infection, act as an indirect encouragement to vice. This argument can only be admitted if it could be shown that fear does not effectually control so impervious and basic an instinct as that with which we have to deal. On the contrary, it has been found in the experience of the Army and Navy that serious treatment of this question by the military and medical authorities and the instruction of the men in the danger of infection and in sexual hygiene generally have resulted in a steady increase of the percentage of those denying exposure in commands where this system is put into practice."

PRACTICE OF MEDICINE AMONG CIVILIANS, ETC.

The laws of all States require that a physician be duly licensed before he be allowed to practice therein, but specified exception is made in the case of medical officers of the Army discharging their duties. These laws vary in different States. Also in some States the military reservations are

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outside the jurisdiction of all State laws and county ordinances while in others they are not; in yet others the State holds jurisdiction in some matters, and in others concurrent jurisdiction with the Federal Government. Immunity from State control is determined by the terms of the reservation, cession, or purchase made by the Federal Government when it retained or acquired possession of the land whereon the post is situated. If the Federal Government has exclusive jurisdiction over the reservation a medical officer has the right to practice among the civilian population thereon. If it has not such jurisdiction, however, the laws of the State in which the reservation is situated prevail in all matters not under the control of the Federal Government exclusively. A digest of the State laws governing the reservations, etc., is given in a work entitled: "United States Military Reservations, National Cemeteries and Military Parks, Title, Jurisdictions, etc.," prepared in the office of the Judge Advocate General, by Chas. E. Hay, Jr., Washington, D. C., 1904.

The interests of humanity sometimes require that the physician render professional aid even if he be not legally authorized to do so. If, in so doing, he is made the victim of a legal action, as occurred some years ago at Hot Springs, Arkansas, he should obtain the gratuitous assistance of the U. S. Attorney for his district to help out of his dilemma.

A medical officer assigned to duty at a post is not expected, as a rule, to render professional services to parties associated therewith but living off the reservation, if he must go to the houses of such parties to do so. Thus, the families of some of the enlisted personnel at Fort Riley, Kansas, live in a neighboring community 4½ miles distant. It would be difficult for the medical officers properly to attend patients in that community, if their illnesses were of a character requiring constant attention or of an infectious character. Such patients as require treatment, however, and are entitled to it, are given it freely if they come to the post hospital for it.

The rigid application, however, of the rule that persons not on the reservation are not entitled to professional visits is not desirable. Thus, most of the married personnel assigned to duty at the General Hospital formerly located at Washington Barracks, D. C., had no quarters available on the post, but lived in the city only a few blocks away. To enforce this rule in such cases would have been ungenerous.

It has been held that a recruiting officer stationed in a certain city was not entitled to professional services from a post in its vicinity even though this was a recruit depot post and the surgeon of the same made the physical examination of the recruits which the former officer sent in. As in the case of retired officers, medical officers were not required to give professional attention if they have to leave the post to do so. But the ethics of the profession requiring that physicians render professional aid whenever this is needed and none other is available, remain unshaken. The foregoing is written to indicate how far such aid under the circumstances mentioned is warranted by law and required by regulations. In any event whether authorized by law or not, professional aid should be rendered when the

See Appendix II—352a.

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interests of humanity require it and the services of another physician are not obtainable. Obviously, a medical officer should acquaint himself with the ordinances governing the local practice of medicine as soon as he joins his post. He should also acquaint himself with the attitude of local authorities on the subject.

The post surgeon should be familiar with local health conditions, such as the prevalence or existence of infectious diseases near the post, the character and history of local epidemics, the character and efficiency of sanitary service of the community, etc. This information he can obtain most readily from the county health officer, and from the mortality records. A few hours spent investigating local public health conditions often results in the acquisition of knowledge which proves of great value.

SERVICE ON COURTS-MARTIAL

Medical officers are not as a rule called to serve on general courts if a sufficient number of line officers are available. The authority of the medical officer to maintain discipline, being limited to only his own branch of the service and the fact that line officers are more immediately charged with this duty in a broader capacity (*e.g.*, as officer of the day), logically requires that they constitute the personnel of the court. When acting in this capacity, however, medical officers must possess as much knowledge of military law as other members of courts-martial. Occasionally a medical officer is president and the validity of the proceedings is much impaired if he be ignorant of a number of technicalities. It is obvious that medical officers should acquaint themselves not only with the manual for courts-martial, but with some standard text-book on military law, *e.g.*, that by Dudley, or that by Davis.

The duties of medical officers when serving on examining boards other than those for the examination of officers of their own department are virtually confined to making the physical examination of candidates, reporting their findings and on these findings voting for or against the entrance of the candidates. Regulations on the subject read in part as follows:

COMPOSITION OF EXAMINING BOARDS[1]

Except for the examination of officers of the Medical Corps, an examining board will consist of five officers, two from the Medical Corps, selected without regard to rank, and three senior in rank to the officer being examined, and, when practicable, chosen from the corps, department, or arm (in the Field Artillery, the branch) to which he belongs. The junior of these three will be the recorder of the board. Except where the action of the entire board is required by this order, the medical officers will participate in the proceedings connected with the physical examination only. In the examination of chaplains, one member of the board will, when practicable, be a chaplain.

[1] Excerpted from G.O. 54, 1914, and G.O. 50, 1915.

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Boards for the examination of officers of the Medical Corps will consist of three officers of that corps senior in rank to the officer being examined. The junior will act as recorder.

PROCEDURE

An examining board (including medical members) having assembled and the officer to be examined having appeared before it, the recorder will read the orders convening the board and directing the officer to report for examination. Members may then be challenged for cause, the revelancy and validity of the challenge being determined by the full board. If the number of members be reduced by challenge or otherwise, the board will adjourn, and the president thereof will report the facts to the convening authority for action. In matters of challenge and where the introduction of testimony becomes necessary, officers being examined may employ counsel if they so desire.

The right of challenge having been accorded, and all the members being present, the recorder, in the presence of the officer to be examined, will administer the following oath to the members: "You (naming the members other than himself) do swear (or affirm) that you will faithfully and impartially discharge your duties as members of this board in the matter now before you. So help you God." The president will then administer the following oath to the recorder: "You (naming him) do swear (or affirm) that you will faithfully and impartially discharge your duties as a member of this board in the matter now before you, and that you will, according to your best ability, accurately and impartially record the proceedings of this board and the evidence to be given in the case in hearing. So help you God."

In the case of affirmation, the closing sentence of adjuration will be omitted.

Should anything arise during the examination requiring the introduction of evidence, the testimony of witnesses will be taken, orally, if the witnesses are immediately available and it can be done without expense to the government, otherwise, as a rule, by interrogatories and depositions prepared in accordance with the requirements of the Manual for Courts-Martial. Should it become necessary, in the opinion of the board, to procure the oral testimony of a witness not immediately available, the facts will be reported to the convening authority for action. All witnesses examined orally will be sworn by the recorder, the oath being the same as that administered to witnesses in trials by courts-martial. During such proceedings the officer being examined will be permitted to cross-examine witnesses and to submit evidence in his own behalf. All hearings of this nature will be conducted in open board and in the presence of the officer being examined. The conclusions reached and the recommendations made in each case will be regarded as confidential.

The examination of an officer for promotion will be conducted in the following order:

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(*a*) As to physical fitness and skill in horsemanship.
(*b*) As to general efficiency.
(*c*) As to professional fitness.

EXAMINATION AS TO PHYSICAL FITNESS AND SKILL IN HORSEMANSHIP

After a careful consideration of the medical history the medical officers will make a thorough physical examination of the officer being examined. In doubtful cases they will be governed by the following decision of the Secretary of War:

"An incurable disease or injury, or a disease or injury not curable within a reasonable time, either of which is of such a character as to disqualify an officer for duty on the active list, constitutes incapacity for service under the Act of Oct. 1, 1890. If, however, a disease or injury be curable within a reasonable time, the officer should be regarded as physically qualified for promotion. The question as to the curability of a disease or injury is one for an examining board to determine upon the advice of its medical members. If a board be unable to determine such question, it should recommend that the officer be reexamined after such period as, in its opinion, may be necessary to permit a determination to be reached." Errors of refraction are not cases of rejection provided they do not fall below 20–40 and are entirely correctible by glasses.

The officer should sign the following certificate: "I certify to the best of my knowledge and belief I am not affected with any form of disease or disability which would interfere with the performance of the duties, under the commission for which I am undergoing examination."

On the conclusion of the physical examination, the medical officers will report their finding in writing to the board, which will then assemble to consider and act thereon.[1] All questions pertaining to the physical fitness of an officer for promotion then or thereafter arising will be determined by a majority vote of the board (including the medical members).

When the board finds an officer incapacitated for active service by reason of physical disability, the examination, except as noted in this paragraph, will cease and the board will report its findings, stating in full the cause of disability and whether or not it was contracted in line of duty. Where a medical officer on his first examination for promotion to any grade is found physically unfit for promotion by reason of disability not contracted in line of duty, the examination will be completed.

If the board finds an officer physically qualified for active service, it will then test his skill in horsemanship. Such test, under the supervision of at least one member of the board, will consist in his riding from 15 to 18 miles in three consecutive hours, and for officers of cavalry and field artillery of such additional exercises as are specially applicable to those arms.

[1] The medical officers' report may take the form of the following: "We certify that we have carefully examined . . . . . and that he has no mental or physical defect disqualifying him for service in the United States Army."

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If during such test an officer displays excessive fatigue or appears unduly distressed, the examination will be suspended, and as soon thereafter as practicable he will be reëxamined physically by the medical members. If he is then found physically incapacitated, the board will proceed as provided above.

If the test should develop no physical disability, but indicate deficiency of skill in horsemanship, the officer will then be examined by the full board (less medical officers) in regard thereto. The examination in this case will consist of a series of exercises, and will form part of the examination as to his professional fitness.

EXAMINATION AS TO GENERAL EFFICIENCY

Under this head the board will consider (1) the use an officer has made of his opportunities, (2) his ability to apply practically his professional knowledge, (3) his general trustworthiness and ability in performance of his official duties, and (4) his ability to command troops or control men.

EXAMINATION AS TO PROFESSIONAL FITNESS

The examination will be in no sense scholastic, or such as to require him to memorize data and statistics ordinarily found in reference tables. Practical exercises and problems will not be framed so as to require a knowledge or training greater than may be required of him when promoted to the next higher grade. The board will be governed by the spirit of the law, which is to ascertain if the officer being examined is fully prepared to discharge the duties that may come with his promotion, and not whether he has successfully memorized the rules and tenets of certain texts. In judging an officer's professional qualifications, the board will take into consideration his age, service, and the duties he has been required to perform.

The character of the examination for promotion as to professional fitness will be as follows:

(*a*) Where an officer has been declared deficient in an oral or written examination on any subject in the garrison or service schools, and an examination (oral or written) on that subject is required by this order, such examination will be in writing; but this provision will apply only to the first examination for promotion following such deficiency.

(*b*) In all other cases the examination will be oral, practical, or written, or some combination of these as indicated opposite the names of the subjects.

(*c*) Should an officer (other than of the Medical Corps) fail in the oral examination on any subject as required by this order, he will be reëxamined at once on that subject in writing. Should an officer of the Medical Corps fail to make a general average of 75 per cent. he will be reëxamined at once in writing on all subjects of the oral examination pertaining to his grade.

(*d*) In case of failure in the practical part of any examination, the

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board will conduct a second practical test of sufficient scope to determine beyond doubt the officer's knowledge of the subject.

The board will prepare in writing for each oral and written examination such questions on each subject as may be necessary to test the theoretical knowledge of the officer being examined; and, similarly, such practical exercises, including problems, appropriate to each practical examination as may be necessary to test his ability to perform the duties of the office to which he may be promoted. For convenience in calculating percentages, the board will assign to each question asked and to each exercise or problem required a value which will be entered upon the margin of the paper. These values must total 100 or some multiple thereof in each lettered subject.

During the examination only such questions or practical work will be given the officer at any one time as he may be able to answer or complete before a recess or adjournment is taken. Each member of the board will note his estimate of the value of each answer given and of each exercise completed; the mean of the three estimates as to any answer or exercise will be the mark of the board for that particular answer or exercise. From the marks thus determined the percentage made in each subject will be computed.

In written examinations and in the solutions of problems involving calculations or writing, the board may be represented by one member until the officer being examined submits his work. When original research is permitted, the work may be done without supervision.

Commanding officers of posts where boards are convened will furnish, upon request, such available troops and material as may be required in the execution of this order. In case of unfavorable weather, practical exercises may be postponed from day to day until satisfactory conditions obtain.

STANDARD OF PROFICIENCY

No officer will be recommended by the board as qualified for promotion who fails to pass a satisfactory examination as to his physical fitness, general efficiency, and professional fitness. For the examination as to professional fitness the following standards are required: For all officers except those of the Medical Corps, a minimum of 75 per cent. in each subject; for medical officers, a minimum general average of 75 per cent.

EXEMPTIONS

There are no exemptions from examination as to physical fitness and skill in horsemanship, as to general efficiency, or where practical drills or exercises are prescribed involving the actual command of troops or the conduct of tactical rides or walks.

RECORD

The board will prepare a separate report (one copy) on the form furnished by the War Department for each officer examined. Should any

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member or members dissent from the opinion of the board, this fact and the reasons therefor will be incorporated in the record. The report when completed will be incorporated in the record. The report when completed will be forwarded to the Adjutant General of the Army for the final action of the Secretary of War, and when officers have been ordered before the board by a department or other commander, such commander will be notified of the conclusion of the examination in each case.

The report will show:

(*a*) The name, rank, and organization of the officer examined, with the number and paragraph of the order directing him to report.

(*b*) The name, rank, and organization of each member of the board, with the number and paragraph of the order detailing him, and whether or not present. Should a member be excused after challenge, this fact, with the name, etc., of his successor, will be stated.

(*c*) The date of assembling of the board and the appearance before it of the officer to be examined.

(*d*) The notification to the officer of his right to challenge, whether or not such right was exercised; the name of the counsel, if any, introduced by the officer being examined; and the decision of the board as to the validity of each challenge.

(*e*) The administering of the oath to the members of the board.

(*f*) (1) For officers other than the Medical Corps.

The result of the examination as to the officer's physical fitness, and if found qualified in this regard, then as to his general efficiency and professional fitness.

(2) For officers of the Medical Corps.

The result of the examination as to the officer's physical fitness, and if found qualified in this respect, or if found disqualified by reason of disability not contracted in line of duty, then as to his general efficiency and professional fitness. An exception is the case of a major undergoing reëxamination after suspension, where the record will be as provided in (1) above.

(*g*) The dissent of any member or members and the reasons therefor.

(*h*) The date of adjournment.

(*i*) The signature of the members. All members will sign the proceedings in the following cases:

1. Examination of a medical officer.
2. When an officer is found physically unfit for promotion.
3. When the right of challenge was exercised.

In all other cases the Medical Corps members of the board will not sign.

Oral testimony taken during the exercise of the right of challenge will be incorporated in the body of the record. Oral testimony taken during the examination as to general efficiency will be recorded and appended to the record. It must appear that each witness was duly sworn. Depositions will be appended. Reference to exhibits will be made in the body of the report.

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There will also be appended to the record a copy of all questions asked during the examination and a description of each practical exercise required. In written examinations each question will be followed by the answer.

Where an officer, other than of the Medical Corps, is found proficient or deficient in any oral or practical examination, the recorder will indicate that fact by the word "Satisfactory" or "Unsatisfactory" over his signature on the proper exhibit. A similar entry will be made in case of an officer found deficient in any subject on the first examination but proficient on reëxamination. In the case of medical officers the percentage made in each numbered subject will be entered on the proper exhibit in lieu of the word "Satisfactory" or "Unsatisfactory." Should the officer be found finally deficient in one or more of the professional subjects (including skill in horsemanship), the record will show the marks given by each member of the board to each answer and practical exercise pertaining to the subject or subjects in which he is deficient and, in addition thereto, a summary of the entire examination, showing the percentage attained in each subject, his general average, and any facts bearing markedly on his general efficiency.

Annually, as a rule before the end of October, all officers on the active list are examined by medical officers to determine their fitness for field service. The report of this examination is forwarded through military channels, to the Adjutant General of the Army. Sometimes this report is formulated by several officers, but not infrequently the examining board consists of one medical officer only. The board examines field officers who must annually take a 90-mile ride in three days, prior to the ride, with a view to then eliminating those to whom the ride probably would be injurious. Field officers are again examined within three hours after this ride, and the reports of the findings made in each case by the board, appended to the data taken before the ride commenced. This latter examination calls for only the pulse rate and whether there are evidences of exhaustion.

The order prescribing the annual test ride has been suspended during the present war.

Applicants for appointment in the Medical Corps are often examined at posts. The following are the instructions for conducting the preliminary examination of such applicants:

EXAMINATION FOR ADMISSION TO MEDICAL CORPS

The examination for entrance into the Medical Corps consists of two parts—a preliminary examination and a final or qualifying examination, with a course of instruction at the Army Medical School intervening. Instructions governing these examinations are forwarded to the senior members of their boards.

Formal invitations are issued from the office of the Surgeon General

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for applicants to present themselves for examination, and no person is admitted to examination without such invitation, unless authorized by telegraph or otherwise from that office.

The minor details necessary for conducting the examination are arranged by the senior member of the board (if of more than one member) and he may call the board together at such time prior to the date set for the meeting as may be necessary, for consultation. Further instructions, if necessary, are furnished upon application to the Surgeon General.

The post surgeon is a member of the post exchange council. Regulations governing this body are published in General Orders. The last edition is dated August 28, 1916.

HOSPITAL SERVICE

The hour at which the surgeon inspects the hospital is fixed by himself. Usually it is 9:00 A.M. but it varies with the season. It is as a rule one and one-half or two hours after sick call, so that the detachment may have an opportunity to clean up the premises after that occasion. In making his daily inspections the surgeon should take note of practically every detail, with the same care as he does on his weekly inspections made Saturday mornings. Though these latter are more formal the only points in which they should be more thorough are that they take note of the field and other personal equipment of the detachment, the prescription files in the pharmacy, the orderly arrangement of the contents of its lockers, drawers and cabinet, and the manner in which the charts are kept in the wards. While conducting an inspection, the surgeon corrects immediately if possible, such defects as he may note. Any defects which require further consideration than that made at the time and place where they were found, he corrects by such general or specific orders as may be necessary. After inspection he discusses with his assistants any matters of mutual interest, especially the condition of the patients in their care. Any infractions of discipline are now investigated and prompt corrective action taken. Reports, returns, requisitions and other papers are verified and signed.

He examines and prescribes for patients who come to the hospital for treatment if his services are requested or assistant medical officers perform this duty if their services are preferred. After completing his duties at the hospital the surgeon makes his professional visits in the garrison. As a rule the prescriptions of the surgeon will reach the hospital during the forenoon.

THE RECORD OFFICE

A careful, systematic disposal and arrangement of papers for future reference is obviously essential if the records are to be complete and reliable. The method employed is simple and can be learned by brief but earnest study. While prior experience is of course desirable it is not essential. A demonstration of how the work of the record office should be performed is much more valuable than a disquisition on that subject.

See Appendix II—360a.

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RECORDS

All military records must be carefully preserved.

All public records, reports, and papers, such as document files, files of special and general orders and bulletins, correspondence books, guard reports, morning reports; the records of enlisted men as kept in service records and deposit books, or on loose leaves, sick reports, etc., are the property of the United States, and will be required by the War Department in the settlement of claims against the Government and for other official purposes. Whenever posts, districts, territorial divisions, departments, corps, divisions, brigades, regiments, and companies are discontinued, all such records will be carefully labeled, packed and marked, showing the command to which they pertain, and will be forwarded to the Adjutant General of the Army, who will be promptly advised of the date of shipment and furnished with a statement of records shipped.

The use of colored inks, except as carmine or red ink as used in annotation and ruling, is prohibited in the records and correspondence of the Army.

Sections 5403 and 5408, Revised Statutes, *i.e.*, the Federal Penal Code, prescribe penalties for the fraudulent or wrongful destruction, withdrawal, or removal from any public office of any public record, paper, or document therein deposited.

No information will be furnished by any person in the military service, which can be made the basis of a claim against the Government, except it be given as the regulations prescribe to the proper officers of the War, Treasury, or Interior Departments, or the Department of Justice. Information concerning sick and wounded officers and enlisted men may be freely conveyed to allay the anxiety of friends. The fact of death may be communicated to relatives, but not circumstances connected therewith which could be made use of in prosecuting claims against the Government. If any person in the military service has knowledge of facts pertaining to the service of an individual who is an applicant for a pension, he may, upon request, if not pecuniarily interested, furnish a certificate or affidavit setting forth his knowledge; but such certificate or affidavit will be furnished only to the Adjutant General of the Army to be forwarded to the proper officer of the Interior Department. Record evidence will be furnished by the War Department only.

BLANK FORMS AND RECORDS

The standard blank forms used in Army administration, with the notes and directions thereon, have the force and effect of Army Regulations. New forms or alterations will not be made without the authority of the Secretary of War, and the date on which a form or alteration was authorized will be printed on the form itself. All notes or directions on these blanks will, prior to their issue, be approved by the Secretary of War. These forms and lists of them will be furnished by the chiefs of the various bureaus

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and offices of the War Department. Requisitions therefore will call for them by number and name.

Copies of hypothetical but typical reports and returns are found elsewhere in this book.

Manuscript returns, rolls, certificates, and other documents are prohibited, when the proper printed forms are on hand.

The instructions for the use of the correspondence book are printed on the inside of the cover, and are accompanied by a correspondence model. When subjects are entered in this book, there is about half a page given for each subject. The number of the first document on the subject is entered on the left-hand side of the page, in a narrow column (such as appears in legal cap), the brief of the subject is entered on the same and the next line or two, below it as required. Under this entry the word "Doc." may be entered to show that the letter has been placed in the "document file." If the subject comes up again, the same number and a letter are entered and also a brief of the new communication. If the half page allowed for the subject proves to be inadequate for the successive briefs (which is rare), a note is made "continued on page" and on the page on which the subject is reopened is entered "continued from page."

It is sometimes convenient in large offices to make a slight modification in this system. This is to arrange in numerical sequence in a file marked "unfinished business" those papers on which action is yet deferred. In the place in which each of these papers would appear in the document file is placed a slip bearing a statement merely of the subject; the number of the document and the letters UBF for "unfinished business file." When they are eventually disposed of, they are placed in their proper places in the document file. The advantage of having a separte file for unfinished business is that from time to time, usually on Monday of each week, the documents can be gone over in their sequence, and if undue time has elapsed in any case, some appropriate action to expedite it can be taken. This method prevents oversights.

The only exception to the practice of giving a new number to each communication, is in the matter of letters reporting changes in the status of the personnel of an organization. In a large post such changes are numerous. The letters are kept together till the end of a bimonthly period, when all retained copies of letters on the subject "Medical Department—Change of Status" for two months are collected in chronological sequence. This group is then given the number which the subject has and a letter as if they all went forward on the last day of the bimonthly period. This practice permits all the many entries in the correspondence book to be made at the same time and saves much handling of it.

While the correspondence book is of proven value, it is not suitable for business of offices in large posts. Thus at Fort Riley the following system was elaborated and found more convenient than the correspondence book method.

In this system two files were kept in the record office, one file for docu-

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ments called the "document file," and one file for the card index, called the "card index file." When documents were to be filed, they were first placed in the ordinary official envelope, so that all the papers in the file were in effect in jackets of the same size and shape. Each envelope was marked with the same number as the document it contained. These were all filed in numerical sequence. Each paper received, and a copy of each which originated in that office was numbered, in numerical sequence, from one up indefinitely. As shown below, they may be lettered also. On a card is entered the subject of the communication and number given it. Cross-reference cards may also be made out. Thus, for a communication received or sent out, dealing with Camps of Militia Medical Officers, and numbered (say) 1210, there may be made out three index cards. Each of these cards has the subject of this letter entered on it (but differently presented) and a number of the communication. The first one has the entry "Camps, militia medical officers, 1210", the second "Militia medical officers, camps, 1210," the third "Medical officers, camps, militia, 1210." All index cards are filed in alphabetical sequence.

Cross references are thus used in the card index in order to expedite the search for a letter, as the manner of the presentation of the subject may be different in different letters, and in the example cited: Militia, or Medical, or Camps, may be the principal concept. Also, cross references guard against omissions.

Each card in the index file considers only one subject, but several communications on that subject, or sub-heads of it, may be indexed on the same card, as in the following example:

Militia (Organized) see Organized Militia and National Guard
S. & W. cards for..... 1294
Instruction of..... 2351
In re status of sick report..... 1294
Subsistence of sick in hospital..... 1307
Department Quartermaster, informs check will be given for militia sick in hospital..... 1341
Officers admitted to hospital..... 2372
Hospital charges for..... 2351
Major and Sergeant detailed as instructors..... 2368
Majors and instructors for Fort Riley..... 2351
Unofficial.

Militia Officers
In re lectures to..... 2351
Hospital charges for..... 2351
Hospital charges..... 2351A
Authority to admit..... 2372
Unofficial.

In these examples here furnished it should be noted that letter 2351 is cross-indexed. If so many communications on a subject come in or go

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out that one card is not enough for index purposes, another on the same subject is started and filed behind the first one.

If a letter comes which treats (contrary to regulations) of more than one subject, or an order is received, which considers several subjects, each subject which it discusses is indexed on its proper card. The number given each subject on the index card is the same as that already given the letter. Thus, on the first card shown above—"Militia, Organized, Instruction of" and "Militia, Organized, Hospital Charges for" are both indexed with the number 2351. This shows that document 2351 treated of both these subjects. Cross references to this document occur elsewhere, in the card index file on cards bearing the caption "Instruction, Militia Officers and "Hospital Charges." On each of these cross-reference cards, this same paper is referred to by the same number 2351. Another point of interest in this method is the following.

It will be noted that a sequence of communications on the subject of 'hospital charges for militia medical officers" is commenced on the second card shown above. The first communication of the series is numbered 2351, the second 2351a.

All documents pertaining to the same subject, no matter when received are given the same number. This is done, in order to have them all together in the document file. In order to better preserve their sequence, however, each communication after the first one, is given a letter from A to Z as well as its number.

If there are so many communications on the subject that the alphabet is exhausted before the subject is concluded, a second letter is added to the designation of the communication. Thus, if a letter is sent out or received on the subject of "typhoid prophylactic," and that letter is given the number 1200, the second communication on the subject will be numbered 1200-a, a third 1200-b, a fourth 1200-c, etc. After 1200-z, the next communication would be 1200-aa, the next 1200-ab, etc.

In order to keep the files complete, entire copies are made of communications sent out and their indorsements, except that those noted in paragraph "E" of the instructions in the correspondence book are numbered, or, if they discuss a subject already considered, they are given its number and a letter.

When a bulky letter comes in, which is not vital to the office, there is merely a note made of its contents, and a reference note, such as "Plumbing, Barracks No. 1, plans for—see Doc. Q.M.O. 1197." These entries are made on a card which is then numbered and filed in its proper place in the card file. If at any time in the future, the surgeon wishes to investigate the plumbing for Barracks No. 1, he finds out from his card file where any document on this subject is to be found (in this case the quartermaster's office), what its number is in that office (in this case 1197), and asks the party in whose office it is, for it. A knowledge of the number which the quartermaster has given it prevents confusion and expedites the search for it.

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When a letter comes in or is sent out that pertains only incidentally to some other on file, it is given its own number, but a slip is made out referring to this other, and the slip is fastened by a clip to the one newly received, or a copy of the one sent out. Thus, if a document on transportation has been numbered 105, and other documents on the same subject have been marked 105-a, 105-b, etc., it would be well to have a letter on a related subject, say "Ambulances," considered in connection with these. As "Ambulances" is a new subject, however, it is indexed as such, *i.e.*, given a card "Ambulances," and also given its own number, say 200. But there is fastened to the letter on "Ambulances" when placed in the document file a slip bearing the words, "See also Doc. 105, 105-a, 105-b," etc. A cross reference is thus afforded in the document file itself, to a related subject, viz., "Transportation."

In order to comply with existing regulations, a correspondence book was also kept up in the surgeon's office at Fort Riley. In this was entered, as soon as a letter came in, the number given in that office (or the number and letter), together with a statement of its contents, such as would appear on its brief, or in a digest of an indorsement. Abstracts of communications going out were also numbered and entered in this book in the same way. It was relatively laborious, and at Fort Riley was practised only because regulations required it, for the simple card index served every purpose. A loose leaf ledger is more convenient for this work in large offices than is the present correspondence book.

Paragraph "E" of the instructions for use of correspondence book is made to apply to the card index file also. No record beyond mere notation is made in either file of documents mentioned in that paragraph.

The card index is in fact the correspondence book with these differences:

1. The entries are made on cards, which can be arranged alphabetically, instead of in a book where they cannot be so arranged.

2. No notation of the abstract of an article is made in the card index, as it is in the correspondence book.

The advantages of this system over the correspondence book are:

1. Cross references are more feasible, thus expediting the search for documents and diminishing the effects of one mistake or omission in indexing.

2. The number of a paper, *i.e.*, its place in the document file, is more easily ascertained.

3. No abstract of documents in long hand being necessary for those documents placed in the document file, labor is saved.

4. The cards can be made out on a typewriter with all the advantages which come therefrom.

5. One card index must be examined in the search for a paper, instead of possibly several successive correspondence books.

The following are illustrative stamps that have been used at post hospitals:

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The Department Surgeon,
Eastern Department,
Governor's Island,
New York.

The Surgeon General, U. S. Army,
Washington, D. C.

The Adjutant General of the Army,
Washington, D. C.

Post Hospital Ft. Riley, Kansas.	Received ..... No. .....

Post Hospital,
Fort Riley, Kansas.

S/R Received. Received back ..... SURGEON.

....., Medical Corps, U. S. A.
Surgeon.

On S and W cards, for remaining cases..... REMAINING.

Numberer for numbering documents, retained nominal check list, etc.
Numberer, *e.g.*, 2127.

Adjustable dating stamp..... *e.g.*, Nov. 13, 1909.

For necessary action. For his information and guidance.
Retained. No record. For compliance.
This paper to be returned. For remark.
To note and return. Fort Riley, Kansas.

Penalty for private use, $300.

War Department
Post of .....
Official Business

Changes made in Army Regulations should be kept up to date.

This is done by pasting in the book at appropriate places, the printed notices of changes received from time to time from the Adjutant General's office. No separate file of these changes is kept.

The changes in the Manual for the Medical Department should be kept up with the same care and in a manner similar to those for Army Regulations. The complete files for General Orders and bulletins from Army and Department Headquarters should be kept separate. Also separate files of Post Orders, Circulars from the Surgeon General's office and Dept. Surgeon's office must be kept.

The orders and circulars from the office of the Surgeon General and Department Surgeon should not only be carefully filed in proper chronological sequence, but copies should be made out and placed in the document file. The subject of which orders from the Surgeon General and the Department Surgeon treat should be entered in the correspondence book or on the proper card of the card index file. Copies of the orders issued by the commanding officer for the government of the post should also be filed in due sequence. There should be kept in the record office a copy of all orders promulgated by the surgeon for the government of the hospital. Copies should be posted on the bulletin board. Among the orders thus posted are those governing the use and transfer of property throughout

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the hospital, the general regulations governing the Medical Department, patients, prescribing duties in case of fire, emergency, etc.

A duty board is kept up in many offices. In this the name of each man is written on a narrow card and inserted at the proper place opposite another card showing the duty designated. Such boards may be extemporized from paper clips held in place on the board by tacks.

Forms employed in the interior administration of large hospitals are the following, viz.:

Form 75, M.D., on which a patient's property is listed; details for the officer and noncommissioned officer of the day; special diet slips, one for each patient; diet slips indicating diets needed in each ward; requisition slips on the store rooms; weekly reports of verification of property, by all persons responsible for the same; clothing requests; and Form 55 with appended series for patients' histories, laboratory examinations, etc.

For patients whose service records are received from other posts, cards similar to those noted below for the enlisted men of the Medical Department are very convenient. They should show, however, additional data, *e.g.*, date the soldier's service record was received and forwarded, date of commencement of each enlistment period, beneficiary, diagnosis, whether in line of duty, ward, hospital number, disposition and date, degree of disability, clothing account, status at date of discharge, etc. These cards are filed in alphabetical sequence and from them muster rolls, service records, payrolls, etc., are prepared.

Other blank forms that are of service have been designed in a similar manner to meet the following special requirements:

For patients requiring special authority to visit a designated ward to see a designated patient on the date entered thereon.

Request for ice showing ward, number of patients, and amount required

Patient's pass, showing hours during which he may be absent on a given date. Countersigned by ward officer and commanding officer.

Pass list showing names of Medical Department men and patients on pass, and hours of pass allowed in each case.

Requests for laboratory examinations, a part of Form 55, M.D.

Reports of laboratory examinations (employing the same forms as above, 55, M.D.).

Requests for radiographic examinations and reports on the same, series of Form 55.

Laundry list, showing number of pieces sent out and number returned, contains names in alphabetical order of all articles laundried.

Baggage checks showing on both stubs and part to be detached, name of party owning baggage, official designation, ward, etc., Form 76, M.M.D.

Treatment card for each patient showing regular and special treatment ordered, with date of order, Form 55*j*, M.D.

Night order, showing date, number of bed, name of patient and treatment, etc., ordered.

Permit for patient to have access to baggage.

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Weekly ward requisition for all expendable material and medical articles used in the ward—classified alphabetically, according to the supply table Forms 16*a* and *b*, M.D.

Postal cards, bearing on the face the penalty stamp and such addresses as The Adjutant....., The Surgeon....., and on the back a form wherein may be entered, by brief insertions, the data which should be communicated to the official addressed, or necessary queries.

Property slips to be used by the property officer. One for each kind of article used in the hospital, a part of the retained return of medical property, Form 17*b*, M.D.

Mess account, Form 74, M.D., showing daily balance of assets and liabilities.

Report of operation, giving name and designation of patient, diagnosis, operation, etc., Form 55*k*, M.D.

Report on examination of organs of special sense, Form 55.

Notification of death to be sent to the adjutant without delay, giving name, official designation and cause of death.

Admission card, giving name, official designation, etc., Form 55*a*.

Danger list, notifying office of name of a patient who is dangerously ill and name and address of nearest relative.

Request specified repairs by the quartermaster.

Fuel order to the quartermaster.

Information required for furloughs, containing name of applicant, official designation, length of time on sick report, nature of illness, ability to travel, means to defray expenses, when to be discharged, and whether an application for transfer to other hospital or for discharge on surgeon's certificate of disability has been made.

Inventory of effects showing number and character of articles left by deceased officer or soldier.

Notification to ward officer of defects found in his ward by the officer of the day.

List of patients in a ward fit for light duty (1) in ward, (2) outside ward.

Report of officer of the day showing hour at which diets, wards and Medical Department quarters were inspected, also hour of night inspection and conditions found.

The records of the members of the Medical Department should be kept on cards or slips. On one of these, as soon as a man joins the detachment, is entered all the information found on his service record.

Such a card or slip should show in appropriately labeled spaces, the surname, Christian name, rank, when enlisted, enlistment period, when he joined, source, date and number of order for joining, amount, time of commencement and expiration of allotment, courts-martial, absences without leave or absence from duty under G.O. 45, or confinement.

Cards may show in addition to the above information, when last paid, clothing account, character in detail, date and authority for departure from post, as transfer, discharge, furlough to reserve, death, desertion, etc.

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Remarks may be carried on the back of the card or slip. These cards should be filed in alphabetical sequence. Whenever anything changes a man's status, or there occurs anything which should be noted on his service record, or which would occasion an entry on the muster or payrolls or the return of the Medical Department, it is immediately entered on this card. The result of using these cards is that when rolls, reports and returns are to be made, all the necessary information is at hand and none is omitted. It might appear that this work would be laborious but in point of fact there are ordinarily but few notations to be made after the initial entries.

Some of the papers occasionally prepared at a post hospital are the following:

TRANSFER TO THE MEDICAL DEPARTMENT PERSONNEL FROM THE LINE

Application is made by the surgeon to the department commander (Form 48, M.D.) through military channels.

When transfer is effected, letter reporting same is sent to the Surgeon General through the department surgeon, and a copy of soldier's service record is forwarded direct to the Surgeon General.

Actual date of transfer to the Medical Department (date of receipt of order at post), to be entered on next pay and muster rolls.

RETIREMENT OF ENLISTED MEN

Application for retirement is made by soldier to the Adjutant General of the Army through the post commander.

Upon receipt of order for retirement: Final statement but *no discharge* is furnished soldier. Accounts closed as of date of receipt of order.

Notification to quartermaster who will pay soldier is made.

Service record (in duplicate) and bearing soldier's signature and post-office address, is forwarded direct to the Adjutant General of the Army.

Soldier's name is dropped from the rolls with explanatory remarks.

Letter reporting retirement and stating authority for same and post office address is sent to Surgeon General through the department surgeon.

Soldier instructed to report post-office address to the Adjutant General of the Army on the last day of every calendar month.

TRANSFER OF ENLISTED MAN TO THE SOLDIER'S HOME

The following classes of soldiers, active or discharged, are entitled to admission to the Soldier's Home, Washington, D. C.

(*a*) Any soldier who has served honestly and faithfully twenty years or more.

(*b*) Any invalid or disabled soldier who has had service in war.

(*c*) Any soldier rendered incapable of earning a livelihood by reason of disease or wounds incurred in line of duty, and not the result of his own misconduct.

When a soldier by reason of his service of twenty years or more desires to enter the Soldier's Home, his company or detachment commander will

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so report to the Adjutant General of the Army, giving the date of each enlistment with organization, the report to be forwarded directly by the post commander.

The papers in the case are forwarded to the board of commissioners of the Home, and if considered favorably, authority will be given for his discharge. He may then proceed to the Home and apply to the governor for admission.

If request for admission is made on account of disability contracted in line of duty, report will be accompanied by a surgeon's certificate of disability and a certificate from the surgeon as to whether in his judgment, the soldier is able to earn a living in civil life.

When a former soldier desires admission to the Home, he makes personal application to the board of commissioners, stating service with organization, and if the application is based on disability, he forwards evidence of the nature and degree of disability.

TRANSFER OF TUBERCULOSIS CASES

The General Hospital at Fort Bayard, N. Mex., is under the direction of the Secretary of War and is set apart as a sanitarium for the treatment of officers and enlisted men of the Army suffering from pulmonary tuberculosis. Officers and enlisted men on the active list of the Army, upon recommendation of the proper medical officers, may be ordered to the General Hospital at Fort Bayard for treatment. No enlisted man will be recommended for transfer unless he is willing if discharged, to remain at the hospital for treatment as a beneficiary of the Soldier's Home for a period of three months from admission thereto. Soldiers suffering from pulmonary tuberculosis who do not desire treatment at that hospital will be recommended for discharge on certificates of disability.

An enlisted man who is sent to Fort Bayard for treatment, or his attendant if he has one, will be furnished by the commanding officer of his post or station with an official telegram blank, and will be instructed to telegraph from Deming, N. Mex., to the commanding officer of the hospital, reporting the train upon which the patient may be expected to arrive.

The recommendation of the medical officer for transfer to above hospital for treatment, together with a full medical report of the case and a certificate by the medical officer stating the disability for which he recommends the transfer of the case to the hospital and his opinion that treatment in that hospital will conduce to the more rapid recovery of the patient, will be forwarded through military channels to the authority competent to order the patient to the hospital. In case of necessity, such an authority may order an attendant to accompany the patient and return to such attendant's proper station on completing the duty, but care should be taken not to send any patient to this hospital when travel would be dangerous or injurious to him.

The medical officer who certifies a case for transfer for treatment to this hospital will be held responsible for the proper selection of the case, for the

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correctness of the diagnosis made therein, and for recommending at the proper time, the transfer of the patient to the hospital.

Retired officers of the Army may apply directly to the Adjutant General of the Army for permission to enter this hospital, the application in each case to be accompanied by the medical report and certificate hereinbefore prescribed for officers on the active list.

TRANSFER TO THE GOVERNMENT HOSPITAL FOR THE INSANE

For classes of persons entitled to admission, see Army Regulations.

The insane of the military service are reported, through military channels, to the Adjutant General of the Army.

This report will be accompanied by the proceedings and findings of a board of at least two medical officers, giving the diagnosis, a detailed account of the medical history of the case in duplicate, and a statement as to whether the disability was or was not incurred in line of duty; also a statement as to whether the patient, if discharged from the service, can be released from military control without danger to himself or others. (Consult Scheme for Examination of Insane, Cir. 12, Surgeon General's Office, 1913.)

If an enlisted man is ordered by the War Department to the Government Hospital for the Insane, all papers, including his service record, certificate of disability, and form of medical certificates required by the Department of the Interior (furnished by the Adjutant General of the Army) properly filled in, are forwarded to the post commander, who forwards them direct to the Adjutant General of the Army. The post commander also prepares and signs an inventory, in duplicate, of the soldier's effects and sends one copy, together with the patient's money and valuables, by registered mail, to the Superintendent, Government Hospital for the Insane, Washington, D. C. The duplicate copy of inventory is retained for post records.

The transfer card (Form 52, M.D.) properly filled in and signed, is sent by the surgeon, direct to the Surgeon General of the Army, with a copy attached of the medical certificate required by the Department of the Interior.

DISCHARGE OF ENLISTED MAN ON ACCOUNT OF DISABILITY

1. If after repeated examinations and sufficient observation, the soldier is found to be permanently unfit for service, the surgeon will report the fact by letter to the commanding officer. This letter will state the cause of the disability and whether it is or is not in line of duty. The commanding officer will direct the soldier's company commander to prepare Form 17, A.G.O., and return to the surgeon through his office. Upon receipt of the form, the surgeon will complete the certificate. Attention is invited to the fact that while the diagnosis is given, the surgeon frequently neglects to state how it disables. If surgical treatment is recommended to remove the disability, but declined by the soldier, the fact will be stated. The surgeon will also be sure to state that the disability is or is not in line of duty. The

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extent to which he is disabled from earning subsistence is expressed by a simple fraction, as ⅓ or ¼ or 1/20, in words and figures.

2. The surgeon will prepare a medical history of the case, which should set forth the cause, symptoms, duration, complications, treatment and such other pertinent facts as he may be able to ascertain by inquiry, without undue delay.

3. The letter, certificate of disability (one copy) and medical history are referred to a board of at least two medical officers, convened by the camp or post commander.

4. This board will carefully examine the soldier and all papers referred to it. Differences of opinion of the company commander, the surgeon and the board will be reconciled if possible. Otherwise the board will proceed as outlined in Par. 9, G.O. 174, 1909, W.D. The proceedings of the board will be recorded on Form 484, A.G.O.

5. All papers referred to the board, together with duplicate copies of its proceedings in each case, will be forwarded by the president to the commanding officer, who forwards them to the department commander, through military channels.

PROPERTY

All the property in the hospital should be under the care of one noncommissioned officer. In small posts this individual should be the senior sergeant on duty with the detachment, but in larger posts, the senior sergeant has so many other responsibilities, that another especially reliable noncommissioned officer should be charged with this duty.

Such medical, quartermaster and ordnance property as is not distributed about the hospital should be kept if possible in separate storerooms. The field medical property should be in a separate room.

A property file should be kept for each class of property, medical, quartermaster and ordnance. A separate file should be kept for field property. These files may best be kept by records on the back of the slips for retained return of medical property.

These slips show with how many articles the surgeon is charged, and where they are, *i.e.*, in what department of the hospital. If at any time an inventory is taken of the property, the surgeon will know just where he will find these articles and how many he will find in each place.

For all the articles in the storeroom the property sergeant is responsible, and for all those not in the storeroom he holds the memorandum receipt of the party who is in charge of that department to which they have been issued. These receipts in fact are the property sergeant's vouchers for the property not in the storeroom.

Entries should be made on these cards in soft pencil so that they can be erased easily. The record of any changes in the distribution of property must be entered on the cards as soon as such change is made, and corresponding changes must be made at the same time on the memorandum receipts. The new entries of the changes made on the receipts should be

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initialed by the parties who signed them, as an evidence of the accuracy of the changes and of their warrant for them. In this connection it may be noted that any entry over another's signature, without his written consent, is a forgery of the second degree.

In the storeroom, property should not only be separated into the three general classes above mentioned—medical, quartermaster and ordnance—but that belonging to either class should be systematically arranged. Thus, that belonging to the Medical Department should be separated into the classes mentioned in the supply table; medicines in one class, hospital supplies in another, etc. These articles in turn should be classified in alphabetical order so that if an inventory were to be taken, a person could do it most conveniently by merely going round the storeroom. This arrangement, however, requires considerable shelf room and can be made only partially applicable as some few bulky articles must be excepted from its operation, *e.g.*, invalids' wheeled chairs, portable bath tubs, etc., but in general terms it is the most systematic and convenient.

Property which is issued on memorandum receipt for the personal equipment of the detachment may be receipted for conveniently on Form 501, Q.M.C., itemizing all the articles of personal equipment issued, and showing the name of the recipient, his receipt, date and number of each kind of article issued. See chapter on "Regimental Surgeon."

Separate cards may be formulated for ordnance, quartermaster and medical property, issued on these memorandum receipts.

MEDICAL DEPARTMENT PERSONNEL

The Medical Department includes with other persons, the enlisted personnel who are permanently attached to the military medical service.

The grades of its personnel are: master hospital sergeant, hospital sergeant, sergeant, first class, sergeant, corporal, lance corporal, cook, horseshoer, saddler, farrier, mechanic, privates, first class, and privates. They are entered in this sequence on the muster and payrolls and on the return of the Medical Department detachment. The compensation of these several grades is as follows:

Rank	Enl. period	If reënlisted within three months					
	1st	2d	3d	4th	5th	6th	7th
Master hospital sergeant	75	79	83	87	91	95	99
Hospital sergeant	65	69	73	77	81	85	89
Sergeant, first class	50	54	58	62	66	70	74
Sergeant	36	40	44	48	52	56	60
Corporal	24	27	30	33	36	39	42
Cook	30	33	36	39	42	45	48
Horseshoer	30	33	36	39	42	45	48
Saddler, farrier, mechanic	21	24	27	30	33	36	39
Privates, first class	18	21	24	27	30	33	36
Privates	15	18	21	22	23	24	25

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Additional pay at the rate of $6 a month for sergeants, Medical Department (sergeants, first class, when authorized by Surgeon General) acting as mess sergeants is allowed (Act May 11, 1908) provided that twenty-five men or more are habitually messed during the month.

Lance corporals receive the compensation of the grade from which appointed (private, first class, or private).

Privates, first class, are eligible for ratings for additional pay as follows: as dispensary assistant $2 a month, as nurse $3 a month, as surgical assistant $5 a month.

Act approved May 18 provides: Commencing June 1, 1917, and continuing until the termination of the emergency, all enlisted men of the Army of the U.S. in active service whose base pay does not exceed $21 per month, shall receive an increase of $15 per month; those whose base pay is $24 an increase of $12 per month; those whose base pay is $30, $36 or $40, an increase of $8 per month, and those whose base pay is $45 or more, an increase of $6 per month; provided that the increase of pay herein authorized shall not enter into the computation of continuous service pay.

An increase of 20 per cent. (foreign service pay) on the base and continuous service pay is granted for foreign service in the Philippines but does not accrue in increase, mentioned in the last paragraph above.

The quotum of men for the Medical Department is kept up either by enlistment from civil life, or by transfer of enlisted men from the line of the Army or by reënlistment of members of the Corps. Enlistments and transfers are made in the grade of private, but noncommissioned officers and privates, first class, may be reënlisted in their respective grades and their warrants and appointments continued in force, provided their reënlistment takes place within twenty days following furlough to reserve. Each reënlistment and continuance will be noted on the warrant or appointment by the surgeon. Further information on this subject is found in the Manual for the Medical Department.

Applicants for enlistment in the Medical Department must meet the same physical requirements as must those enlisted for other branches of the service, except that their vision need not be so perfect. Army Regulations provide that the standing requirements for vision for the enlisted men of the Medical Department shall be $^{20}/_{70}$ in each eye, correctible to $^{20}/_{40}$ with glasses, provided that no organic disease exists in either eye.

In the selection of the members of the Medical Department, an effort must be made to secure men of superior qualities, who have had a fair education. Unfortunately, this is not easily effected, as there are certain line officers who oppose the transfer of desirable men, and attempt to transfer to the Medical Department the most worthless men in their commands. While this policy would relieve a company of undesirables it eventually would rebound to its disadvantage in view of the inferior medical service they would thereby inevitably receive.

So far as possible, however, the department should be recruited from the organizations with which a detachment is serving. The members of these

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companies have military records to which the medical officer may refer and assure himself to a degree of the reliability of the applicants. They have learned the meaning of discipline and have acquired the rudiments at least of military proprieties and methods. An acquaintanceship with the service is a veritable asset which should be considered by officers making transfers. The medical officer, especially if he is serving with a small detachment, comes, in ward service, into more frequent and intimate personal contact with the several members of his command than does the line officer and is more dependent upon their coöperation, especially in dispensing and nursing. Because of this fact discipline as a rule is not so rigid in form in the Medical Department as it is in the line. This relative apparent laxity may readily be misunderstood by a member of the detachment who has not learned that it is a difference of form rather than fact and who does not appreciate the paramount necessity for discipline and subordination.

The command of the Medical Department detachment requires that the surgeon exercise highly similar measures for the promotion of its happiness and increase of its efficiency, as must a captain of the line in the care of his company. The duties differ, but the principles of administration are the same in both. Medical officers will find in Captain Moss's "Officers' Manual" in the chapter having the caption "The Company," a well-considered discussion of many valuable administrative measures quite as applicable to a detachment as to a company. Much information is also to be found in Captain Moss's "Noncommissioned Officers' Manual," published by the Infantry Association at Fort Leavenworth, Kansas.

The two essentials which subordinates most demand are justice and satisfactory food—a square deal and a square meal. This juxtaposition of the abstract and the concrete is not as farcical as it may seem. The one secures mental and the other physical content. The expediency of obtaining these desiderata, quite apart from all obligation to do so, is apparent. When a man enlists he surrenders many of the privileges he formerly enjoyed. He can no longer select his vocation, food or clothes. The water which he drinks is selected by his commanding officer. The quality of the air he breathes in the squad room is determined by the ventilation and this in turn is regulated by orders. This surrendering of rights is invariably incident to passage into a highly organized society—the extent of the surrender being commensurate with the height of social organization to which a man then becomes a party. When a man goes from the country to the city he can in many things no longer pick or choose what he prefers, but must take what water, food, etc., may be available and must conform to many new ordinances. The authorities in such a case are entrusted with a commensurate increase in responsibility and must exercise every care that such new rules as they may enforce be as little irksome as possible, and that the loss of certain former privileges be fully compensated.

The maintenance of discipline is essential, but, as in other staff departments sometimes presents peculiar difficulties. Duty well done is supposed, by the immunity from punishment which it secures, to be its own reward, but

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its performance can be encouraged by demonstrated appreciation. Such appreciation may be shown by assignment to congenial duties, furloughs, pass privileges, etc. As human nature is prone to abuse its privileges and resent their justified withdrawal, the conferring of these requires care and circumspection. Punishments should be graded according to the offense and when an offense has been punished the incident should be considered closed. A dereliction that has been atoned for should not be held up against a man except as indicating his general reliability. Mild offenses should be punished by reprimands, withdrawal of pass privileges, assignment to uncongenial but not essential duties, compulsion to deposit a certain amount of pay with the paymaster, etc. If parties be assigned as a punishment to uncongenial but essential duties, *e.g.*, scullery work, the performance of these is done without zeal, and in the event of there being no recalcitrant soldier available, if some person who has committed no fault is assigned to such service which he has learned to regard as punishment, he resents it accordingly. When trials by Summary Court are necessary, the charges and specifications are filled out in accordance with the provisions of the Manual for Courts-Martial. If charges for trial by a General Court are forwarded to the adjutant they must be accompanied by the records mentioned above.

Special courts-martial have cognizance of more serious offenses than have Summary Courts, and before them may be tried all offenses not capital. Charges are submitted on a special form (594, A.G.O.) accompanied by a brief statement of the evidence.

Rotation of duties is desirable, within limitations, in hospital service. The tenure of a man in one position too long leads to his stagnation and prevents his being properly available for other assignments, if an emergency demand for his services arises. But selected men, numbering at least one-third of the detachment should be encouraged to specialize.

Duties of the personnel should be clearly delimited.

A roster of the duties to which subordinate officers and men are assigned should be made out the first of each month. One copy of this should be kept on the surgeon's desk, another on the desk of the senior sergeant, and a third on the bulletin board. Such a roster is the following:

POST HOSPITAL

Fort.....

Orders No.....

The following assignments to duty in this hospital will take effect..... 19..

OFFICERS

1.....	Surgeon in charge.
2.....	In charge of medical wards of hospital, and physician to out-patients, *e.g.*, families of officers.
3.....	Assistant on duty in medical wards and out-patients, including families of enlisted men and civilians.
4.....	In charge of surgical wards, operating room and laboratory, physician to families of officers.

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5.....Assistant on duty in surgical wards, operating room and laboratory.
6.....In charge of venereal ward, sick call. Physician to civilians employed on post.
7.....Emergency calls, instruction, etc. Special details.

MEDICAL DEPARTMENT

Master Hospital Sergeant
1.....Senior noncommissioned officer. General supervision; particularly in charge of the Medical Department personnel, its conduct, discipline, instruction, appearance, and the property and papers pertaining thereto; of the field equipment of the Medical Department barracks and other dependencies; stables and transportation; grounds and gardens; heating plants; repairs; general police; sick call; in charge of hospital, patients, operations, mess, all property, storerooms, linen and laundry, of the office, correspondence, records, etc. He will make one inspection each day and report to the surgeon matters requiring attention.

Hospital Sergeant
2.....Assistant to senior noncommissioned officer with property returns, reports and returns, change of status, Medical Department, instruction of same, morning reports, etc.

Sergeant, first class
3.....Assistant immediately in charge of office, correspondence, register and report of sick and wounded, requisitions, returns, records, etc.

Sergeant
4.....Assistant immediately in charge of the mess, its accounts and property; hospital fund; police of kitchen and dining room and appendances.

Sergeant
5.....Assistant immediately in charge of wards, operating rooms, laboratory, linen room, mortuary, police of inside of buildings, except dining room and kitchen.

Sergeant
6.....Provost.

Sergeant
7.....Dispensary.

Corporal
1.....Identification records, care of X-ray laboratory.

Cook
1.....Cook.

Privates, first class:
1.....Artificer.
2.....Ambulance driver, in charge of stables, etc.
3.....Ambulance driver, assistant in stables, etc.
4.....Gardener.
5.....Wardmaster No. 1.
6.....Wardmaster No. 2.
7.....Wardmaster No. 3
8.....Wardmaster No. 4.
9.....Wardmaster, isolation and prison wards.
10.....Surgeon's mail orderly, telephones, police of surgeon's office, etc.

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11.....Clerk.
12.....Assistant cook.
13.....Diet cook.
14.....Dispensary attendant, telephones, patients library, police of dispensary, waiting room orderly.
15.....Operating and surgical dressing rooms, etc.
16.....Laboratory and X-ray room, etc.
17.....Mess room, pantry.
18.....Night nurse.

Privates

1.....Assistant to cook.
2.....Assistant to diet cook.
3.....Furnaces, police of furnaces and coal rooms, basement halls, storerooms (except in annex), mortuary, soiled linen room, etc.
4.....Assistant with furnaces and interior police, etc.
5.....Mess room and pantry, police of commissary storeroom.
6.....Mess room and pantry, police of commissary storeroom.
7.....Room orderly, annex squad room, police of annex, except wards, kitchen and mess room.
8.....Police of administration building offices (except surgeon's), halls, upper storerooms, bath rooms, clothing room, front veranda, etc.
9.....Outside police.
10.....Outside police.
11.....Outside police.
12.....Outside police.

Division of labor among the office force should be reduced to a system. Some such assignments and orders affecting it as the following have proven of value:

Master Hospital Sergeant A.....

Orders and order book, money papers, hospital fund, clothing requisitions, roster of detachment, progress repairs.

Hospital Sergeant B.....

Letters and indorsements, correspondence book, personal reports, weekly reports, documents and file, reports of death.

Sergeant, first class, C.....

Circulating journals, return of Medical Department, report of change of status, register and report cards, sick and wounded.

Sergeant D.....

Property papers, morning reports.

Sergeant E.....

Pay and muster rolls, deposit books, report of deposits, final statements, discharges, surgeon's certificate of disability, enlistment papers, report and record of physical examination of recruits, personal identification cards, court-martial charges.

Each member of the office force should be held personally responsible for the correct rendering of his own papers, but all should unite in rendering such mutual assistance as may be necessary to complete the work promptly on schedule time.

All papers coming in or going out should be placed on the desk of the senior sergeant.

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Office hours on week days in a large hospital may be as follows;

Master Hospital Sergeant A: 9:00 A.M. to 1:00 P.M. and 3:00 P.M. to 5:00 P.M.

Hospital Sergeant B: 8:00 A.M. to 12:00 M. and 1:00 P.M. to 4:30 P.M.

Sergeant, first class, C: 8:00 A.M. to 4:30 P.M.

Sergeant D: 8:00 A.M. to 12:00 M. and 2:00 P.M. to 5:30 P.M.

Sergeant E: 8:00 A.M. to 12:00 M. and 2:00 P.M. to 4:30 P.M.

Office hours on Sundays and holidays should be from 9:00 A.M. to 1:00 P.M. during which time only one member of the office force should be required to be present, each taking this duty in turn.

One orderly should be present in the office from 6:00 A.M. to 10:00 P.M. daily.

One noncommissioned officer should be on duty from 6:00 A.M. to 10:00 P.M. on week days, and from 1:00 P.M. to 10:00 P.M. Sundays and holidays. He should not be required to remain in the office during these hours, but should not leave the hospital or hospital grounds. He should keep the orderly notified of his movements so that he may be promptly summoned in case of need.

The desirability of professional secrecy on the part of the Enlisted personnel should be emphasized. At present this is generally ignored, but its expediency is so manifest that it should be more generally enforced.

Providing diversion for the personnel of the Medical Department is sometimes difficult. Purchases of athletic apparatus, books, and other reading matter must be made from the hospital fund, on the authority of the department surgeon, and the way in which this fund is handled obviously determines the resources available for buying means of diversion. In some detachments the men are more content if the income to the hospital fund be spent on their table, but in others, especially those situated at a distance from large cities, some of the fund should be devoted to amusements. A billiard or pool table or both should be purchased. Whether a fee is charged for use of the table should depend on the ease with which a hospital fund is replenished from other sources. Usually fees should not be demanded. If they are, they should be paid for in advance. A convenient plan is to issue for $1.00 each, tickets entitling the holder to twenty or forty cues or some other designated number. Usually 2½ cents a cue is the fee demanded. If these tickets are so printed that there are the same number of spaces in the margin as the number of cues to which the holder is entitled, a space for each cue played by the holder, can be punched out readily by the man on duty for this purpose, a circumstance not feasible in small detachments. In order that one or two men may not monopolize the tables, an order should be posted that no man can use the table for more than a certain number of hours each day, if there be any other person present who desires to use the table and who has not already exhausted his time allowance. The number of hours which each man should be

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allowed at the table must be determined by the number of men in the detachment, etc.

A library affords diversion to some members of the detachment. It should be selected with great regard to the wishes of the men. It should not only contain books which are instructive but those that are entertaining. Indeed it should be bought with this latter end in view. As a rule the men will have more interest in current magazines and newspapers than in books. If these be carefully selected they often prove to be a good investment. A piano is often appreciated, but elaborate outfits are poor investments.

Card playing may be permitted if gambling can be avoided, but in no event should members of the Medical Department be permitted to play with patients. A better rule is to prevent their playing cards, dice or other games with them altogether. Noncommissioned officers should not be allowed to play with subordinates.

The soldier's equipment is itemized in the chapter on "The Regimental Surgeon."

The articles, supplied by the Medical, Ordnance and Quartermaster's Departments do not become the property of the soldier, but remain Government property.

The soldier is held responsible for the proper use and care of these articles and of his clothing, and in case of loss or damage of public property, due to his own carelessness or neglect, he is required to pay for the same, and may also be punished by court-martial. See also the chapter on "The Regimental Surgeon."

There should be posted in the squad room a picture indicating the manner in which the men should prepare their beds for formal inspections. A photograph is better for such a purpose than is a description.

The members of a given Medical Department detachment should be all white or all colored, the race to which its members belong being that of the command with which the detachment is serving. In case both white and colored troops are serving in the same garrison the detachment should be of the same color as the organizations which numerically preponderate. If the races in the garrison be numerically equal, a condition excessively rare, the personnel of the race already in a majority on duty at that post should be retained. The undesirability of two races being associated in the same squad room is not theoretical but is an actual obstruction to harmony. If there be but one or two negroes on duty in the detachment they are to a degree ostracised, are relegated to the performance of menial duties and scant inducements to work for promotion are extended to them. The grouping of the negro personnel into detachments serving with negro troops and the promotion of the best colored corps men to the grade of noncommissioned officers (in the same manner as has long been the practice in negro regiments) would redound to the contentment of men of both races.

Accounts of pay and clothing of the members of the Medical Department are kept by the surgeon under whose immediate direction they are

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serving. During the present emergency, however, clothing necessary is drawn, and the accounts prescribed in orders are not necessary. All members of the Medical Department casually at a post camp or other station are under the immediate orders of the surgeon, except prisoners, who will, however, be borne on the muster rolls, morning report, and returns of the Medical Department detachment. If discharged, or furloughed to the reserve, their final statements will be prepared by the surgeon.

When a member of the Medical Department is transferred from one station to another in time of peace, the surgeon of the post which this man leaves forwards to the surgeon of his new post with his service record, an efficiency report, giving information as to the man's sobriety, his attention to duty, and proficiency in identification work. There is also noted on such slip, in the case of a noncommissioned officer, his intelligence, ability to command men, ability as a pharmacist, clerk, drill sergeant, soldierly bearing; and, in case of a private, first class, his special qualifications, as nurse, cook, clerk, typewriter, stenographer, etc. A copy of this report is retained.

In changing station, the equipment taken by a soldier of the Medical Department is that specified in Par. 48, M.M.D.

When it is necessary to employ members of the Medical Department on guard duty at posts where no other troops are stationed, the issue of firearms to them is authorized. Otherwise no arms will be issued to members of the Medical Department except as provided in Army Regulations.

The several detachments of the Medical Department also receive instruction in a manner indicated in Pars. 167 to 180, M.M.D. This is a highly important duty and should be followed carefully.

In order to ensure the intelligent interest of the men, the surgeon should require that all men make an average of 70 per cent. in the monthly instruction. Each lecture after the first one, should be preceded by a quiz on the work already considered in that course. Failure to make a final mark of 70 in a subject, should occasion the withdrawal of pass privileges until this mark or a higher one is made, at a later examination, or until the party thus failing is excused.

Instruction in the regular course should be supplemented by at least one hour's work weekly in first aid, when the men apply bandages, extemporize splints, and imitate the highly practical service which they would render in the field.

If a member of a detachment does not get benefit from his instruction, the fact should be reported to the Surgeon General, with a request that the man be excused from further instruction. It is sometimes requested that the man be honorably discharged for the convenience of the service.

Orders governing the course of instruction may take the following form:

Memorandum:

The course of instruction in nursing, bandaging and use of appliances, will begin on Thursday, January 14, and will be given on Mondays, Tuesdays, Thursdays and Fridays of each week, from 1 : 30 to 2 : 30 P.M. for the period

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necessary for thirty-six hour's instruction. The last hours instruction will be followed by an examination of all members of the detachment.

First Lieutenant....., Medical Reserve Corps, is designated as instructor in nursing, bandaging, and use of appliances. He will be present at and have immediate charge of the instruction in the subject named. Sergeant....., Medical Department, is designated as assistant instructor in nursing, bandaging and use of appliances.

The following named members of this detachment will be required to attend the course of instruction (names of parties designated, follow):

Before a member of the Medical Department is recommended for promotion his record should be scrutinized. His general aptitude should be considered as well as specific ability in certain lines of service. He should be caused to answer questions asked in former examinations in order to discover in what subjects, if any, he is deficient. Candidates usually make their lowest marks in arithmetic and paper work. The subject's ability to command men and proficiency in paper work are given too little stress by most medical officers who recommend candidates for promotion. For his own reputation, as well as for the welfare of the candidate, a medical officer should thoroughly instruct a candidate in those subjects in which he is deficient.

The following are typical questions asked in an examination for promotion to the grade of sergeant in the Eastern Department.

ARITHMETIC

1. Add the following sums; 23,964, 57,318, 68,439, 18,327, 56,825, 92,387.

2. How many barrels of flour at 5 cents per lb. can be purchased from $3,785,908?

3. Reduce to decimals $^{15}/_{32}$, $^{99}/_{200}$, add together, and express as a vulgar fraction.

4. Give the wall area of a room 12 feet by 15 feet and 20 feet high, excluding 3 windows each 6 feet by 4 feet and 2 doors each 7 feet by 3 feet.

5. How much cocaine is required to make 387 c.c. of a 2½ per cent. solution?

6. A garrison of 560 men have provisions to last during a siege at the rate of 1 pound 4 ounces per day per man. If reduced to 14 ounces per day per man, how large a reënforcement could be fed daily?

7. From the following facts find the average cost per day for each person fed by the hospital covering the period Dec. 1 to 31, inclusive, 1911.

RECEIPTS

On rations and savings account of enlisted men: 793 rations at 30 cents.
Of general prisoners: 79 at 30 cents.
From retired soldiers sick in hospital during the month: 29 days at 40 cents
From civilians sick in hospital during the month: 17 days at $1.25.

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EXPENDITURES

For food: $311.29.

It is assumed that there was no food on hand at the beginning of the period, and that none was left at the end of the period.

8. A field army consisted of 20,661 enlisted infantry, 8735 enlisted cavalry and 6887 enlisted artillery. These troops were officered at the rate of 5 per cent. and had a Medical Department personnel amounting to 3 per cent. of the enlisted strength. What was the total number of officers and men of all branches?

9. At a post having an average strength of 854 in May, 492 days were lost on sick report from all causes, 65 per cent. were for causes in line of duty and 90 per cent. of the remainder were for venereal diseases. Give the constantly non-effective rate per 1000 for (*a*) all causes; (*b*) causes in line of duty; (*c*) for venereal diseases.

10. A division numbering 25,000 sustained a loss of 15 per cent. in battle, of these 20 per cent. were killed, 8 per cent. non-transportable, 32 per cent. required transportation and 40 per cent. were able to walk to dressing stations. How many were there in each class?

MATERIA MEDICA

1. What is an active principle? A volatile oil? An anodyne? An anesthetic? An anthelmintic? A diaphoretic? Give an example of each.

2. What are the different methods of administering medicines?

3. What is adrenalin hydrochloride and what are the indications for its use? Thyroid extract? Pepsin?

4. From what is opium obtained? What are the principal derivatives and preparations of opium and their doses?

5. How is cantharides usually used and what precautions must be observed in its use? Why?

6. From what is quinine obtained? Describe its appearance? What other drug may be mistaken for it?

7. Describe santonin and give method of its administration and its effects on the patient.

8. Describe thymol, the method of administering it and the precautions to be observed in using it in the treatment of ankylostoma (hook worm).

9. How is the hydrated oxide of iron prepared and for what poison is it used as an antidote?

10. Discuss phenol and the indications of its too long-continued use.

PHARMACY

1. Define solvent. Mention four solvents.

2. What is an emulsion and how prepared?

3. What is the ordinary relative strength of a tincture to a fluid extract of the same drug.

4. Give the official names of the following drugs: Urotropin, phenacetin,

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calomel, cascara sagrada, Rochelle salts, carbolic acid, cloves, paregoric, Fowler's solution, cod liver oil.

5. Describe the preparation of lime water. What is the official name?

6. How would you prepare paregoric?

7. What is the dose for an adult of the following drugs: Tinct. aconite, tinct. opii, morphine sulphate, atropine sulphate, bichloride of mercury, silver nitrate, croton oil, Dover's powder, dilute hydrochloric acid?

8. Give the antidotes for the followings drugs: Carbolic acid, morphine, arsenic, bichloride of mercury and oxalic acid.

9. Define the following and give an example of each: Escharotic, hypnotic, antiseptic, diuretic, diaphoretic, styptic, anthelmintic, antipyretic, vesicant, emetic.

10. Rewrite the following prescription using the metric system:

Tr. Opii	℥ x
Acid Hydrochlorate dil	℥ iss
Quinine Hydrochlorate	Dr. iii
Tr. Cinchona Comp.	
Spts. Aetheris Comp. aa	℥ iss
Ol. Menth. Pip	♏ xx
Aquæ q.s. ad	O i

MINOR SURGERY AND FIRST AID

1. Define minor surgery. What is meant by first aid?

2. What is meant by sepsis and how would you prevent or control it? Give the method you follow in preparing a patient for a surgical operation and the reason therefor.

3. How do you recognize the difference between a broken and a dislocated bone? Give the essential symptoms of each condition.

4. What do you understand by suffocation? What are some of the ways in which it is produced and what would you do in each case?

5. How could you tell if a man is bleeding from the lungs or stomach and what would you do for such a case?

6. What is a foreign body? How would you remove such from the eye, ear, nose and throat respectively?

7. You find a man unconscious. What are some of the causes of the condition that would suggest themselves to you, and how would you determine which produced the insensibility?

8. Describe the first aid appliances used by the Medical Department, U. S. Army.

9. You are notified at the hospital that a man is lying 500 yards distant suffering from a gunshot wound of the groin with severe hemorrhage. Describe in detail what you would do if the entire responsibility of the case rested upon you.

10. You are in charge of a litter squad searching the battle field for wounded. You are hailed by a wounded man, who tells you that he is shot through the thigh and thinks the bone is broken. What first-aid treatment

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would you render him and what means would you use in transferring him to a dressing station? In describing the methods, use the language of the Drill Regulations so far as applicable.

CARE OF SICK AND WARD MANAGEMENT

1. What are the duties of a wardmaster?
2. Upon admission to hospital what disposition is made of:
(*a*) The patient.
(*b*) His clothing and effects.
3. (*a*) Give three methods of taking a patient's temperature.
(*b*) What is the normal temperature, pulse and respiration?
(*c*) How would you take care of the thermometers in use in a ward?
4. (*a*) How may a ward be ventilated in the absence of special arrangements for this purpose?
(*b*) What temperature should be maintained in a ward artificially heated.
5. (*a*) How would you give a sponge bath to reduce temperature?
(*b*) How would you give a tub bath to reduce temperature?
6. How would you apply heat to a ward patient in collapse or after an operation, and what precautions would you observe?
7. How would you care for the sputum cups and bed pans in use in a ward?
8. What special precautions would you observe in nursing a typhoid fever patient.
9. State in detail one good method of disinfecting a room using only material on the medical supply table.
10. (*a*) What do you understand by "surgically clean"?
(*b*) How would you sterilize instruments for an operation?

ELEMENTARY HYGIENE

1. In choosing a camp site, what are the first and most important things to be considered in relation to health? How would you look upon occupation of an old camp site by an organization arriving at a later date?
2. What should be done in camp sanitation to prevent typhoid fever among troops in the field? What should be done in a post to prevent malarial infection?
3. What would you understand by "sanitary sink" and when and how should they be constructed in a camp to be occupied for an extended time?
4. Flies and mosquitoes frequently cause diseases of soldiers in camp. Name the diseases generally communicated thereby. What would you do to prevent communication of disease by flies? by mosquitoes?
5. In a tropical climate what safeguards are to be employed to avoid bowel complaints? What can you say as to eating and drinking when overheated or fatigued? Are alcoholic drinks generally to be avoided in all climates, and if especially so in any climate state why?

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6. What do you understand by ventilation? What ingredients of the air are injurious to persons in an overcrowded room? How many cubic feet of air space should be allowed a man in a barrack room? a hospital ward? why?

7. How is impure water rendered wholesome? Name all the diseases you can that may be caused or communicated through impure drinking water.

8. How would you disinfect a room that had been occupied by a person with scarlet fever?

9. What are the benefits to be derived from the bath by one in ordinary good health? What care should be taken of the mouth and teeth and why? How should the feet be cared for?

10. Give a short statement as to what you consider some of the most injurious things that can be avoided by the personal hygiene of the soldier and how they can be avoided.

The following are the questions asked in a recent examination for promotion to the grade of sergeant, first class, Medical Department.

ARITHMETIC

1. Divide .048 by $1\frac{3}{4}$ and express the result both as a decimal and a common fraction.

2. In a garrison of 980 men, 87 had measles and 3 died. What was the percentage of men attacked and what was the death rate per thousand of the command?

3. At $21\frac{1}{2}$ cents per square yard, how much will it cost to plaster a room 14 feet long, 18 feet wide, and 6 meters high, no allowances being made for openings.

4. How much 5 per cent. solution of carbolic acid can be made from an ounce of avoirdupois weight, the result to be expressed in terms of the metric system.

5. A bin 6 feet long, 4 feet wide and 3 feet deep is used to store potatoes. How many bushels will it hold, assuming that 2218 cubic inches is equivalent to a bushel?

6. Multiply 25 bushels, 3 peck, 2 quarts, $\frac{1}{2}$ pint, by 15.

7. Find the cost of a pile of wood 12 feet high, 4 feet wide, and 40 feet long, at $9.00 a cord.

8. One buys an ounce avoirdupois and sells it troy. What is the per cent. of loss or gain?

9. If 6 men working 4 hours a day can finish a piece of work in 10 days, how many men, working 5 hours a day, will it require to finish the work in 4 days?

10. A sold his house and received 45 per cent. of the selling price in cash. He invests three-fourths of this amount in stock to the amount of $2160. For how much did he sell his house?

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MATERIA MEDICA

1. Define the following terms: Materia medica; diuretics; hypnotics; narcotics.

2. Name the various ways drugs may be administered. Give rules for determining the relative doses to be used in the administration of drugs by the various routes.

3. What is opium and from what obtained? Name the preparations (exclusive of the alkaloids) furnished by the Medical Department, which contain opium, and give the dose of each.

4. Name the alkaloids and alkaloidal derivatives of opium which are furnished by the Medical Department, and give doses.

5. How would you distinguish between quinine sulphate and strychnine sulphate? Between magnesium sulphate and oxalic acid?

6. What are the ordinary names of the following: Sulphonmethanum; phenyl salicylas; acetphenitidin; oleoresinæ aspidii?

7. Give the components of the following: Mistura glycyrrhiza composita; pilulæ catharticæ composita; syrupus hypophosphus compositus. Tell what each is used for.

8. What is the action and ordinary dose of the following: Aspirin; strychnine sulphas; calomel; potassium iodide; solution of mercuric and arsenous iodides.

9. What are salvarsan and neo-salvarsan? For what used? How and in what form?

10. What are the special antidotes for the following poisons: Oxalic acid; nitrate of silver; bichloride of mercury; acetate of lead; arsenous acid?

PHARMACY

1. Define the following terms: Pharmacy; pharmacopeia; dispensatory; precipitation; decantation; filtration.

2. What is percolation? Describe the process in detail, stating what precautions are to be taken in the packing of the percolator.

3. Define the term incompatibility as applied to drugs. What are the varieties of incompatibility? Give an example of each.

4. Give six Latin terms and the abbreviations thereof, which are ordinarily used in prescription writing.

5. How would you convert grammes into grains; grains into grammes; ounces into cubic centimeters; liters into cubic centiliters?

6. What is an emulsion? What are the excipients ordinarily used? How would you prepare an emulsion of cod liver oil.

7. Describe a good method of making quinine pills.

8. What are suppositories? What materials are used as a basis? Describe a method of making one form, the variety to be of your own selection.

9. How would you make the following preparations: Aqua calcis; aqua camphor; pulvis effervescens aperienta?

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10. What would your course of procedure be should you receive the following prescription signed by your surgeon:

℞. Morph. Sulph..... .20
Potass. Iodid..... 4.
Aqua destil..... .60
S. 20 drops 3 times a day.

MINOR SURGERY AND FIRST AID

1. In a wound of the chest what would lead you to believe that the chest cavity was penetrated and the lung wounded? What first-aid treatment would you adopt?

2. What is the cause of tetanus or lock jaw? What are the characteristics of wounds most likely to eventuate in this disease? What is the first-aid treatment of wounds of this character?

3. What are the symptoms of dislocation of the shoulder? How would this dislocation be reduced and what would be the subsequent treatment?

4. What are the general signs and symptoms of a fracture of one of the bones of the extremities? What is the first-aid treatment of a fracture of both bones of the forearm?

5. How would you remove a foreign body fromthe eye? the nose? the ear?

6. What would you do if called to see a patient who had been struck with lightning, but was still living? What in case of a patient suffering from a shock from live wire?

7. Describe the extraction of a molar tooth. What are the differences between the forceps used in the extraction of the lower molars and the forceps used in the extraction of upper molars; state reasons for same?

8. How would you distinguish between a case of alcoholic stupor and one of apoplexy? What would you do if called upon to take care of a case of epilepsy?

9. What are the symptoms of poisoning by wood alcohol? What is the proper treatment for same?

10. Describe in detail what you would use and how you would vaccinate a patient with a view to protecting him from smallpox.

CARE OF SICK AND WARD MANAGEMENT

1. What should be done when a patient is dying in a ward? What of the body after death and what steps are taken in the preparation for burial, should no autopsy be contemplated?

2. What is the normal pulse, temperature and respiration rate in an adult man? What are the points to be noted in taking the pulse? What are some of the peculiar forms of respiration noted in cases of disease and injury?

3. How would you prepare a bed for an operative case?

4. Mention several methods of reducing the temperature of a typhoid fever patient. Describe fully the cold bath treatment of typhoid fever.

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5. Describe in full the method of disinfecting a room with formaldehyde.

6. What precautions would you take to prevent the spread of typhoid fever?

7. What is an enema? How are enemata classified according to the purpose for which they are intended? Describe the preparation and administration of the fluid to be used for any one of the purposes for which it may be appropriate.

8. What would a subnormal temperature indicate?

9. What is incontinence of urine? Retention of the urine? Suppression of urine? How would you distinguish between the two latter named?

10. Give in detail a two-day's dietary for a patient on liquid diet; light diet.

ELEMENTARY HYGIENE

1. What are the three general methods of purifying water? Give an example of each and describe the process.

2. What are the impurities of air that we have to deal with in dwellings?

3. What are the meanings of the terms "cubic air space" and "floor space" as used in connection with hygiene and sanitation? What is the minimum of each in hospital wards?

4. What do you understand to be the meaning of the term "ventilation?"

5. How would you dispose of garbage, and how of urine and feces in a permanent camp?

6. What precautions would you take in and around camp with reference to flies? What is the necessity of these precautions?

7. What do you understand by the term "trap" as used in connection with plumbing? What is the object and how accomplished?

8. What are the differences between the "direct," "indirect" and "direct indirect" systems of heating in connection with steam and hot-water heating plants?

9. Name some of the diseases conveyed by mosquitoes? What is the variety of insect concerned in the transmission of each? Give the important characteristics of each type of mosquito.

10. What precautions would you take for the prevention of the spread of disease by mosquitoes, and what steps for the extermination of the insects?

The following are a list of questions that were asked in the examination for hospital sergeant, Feb. 14, 1917.

ARITHMETIC

1. To allow a patient 300 cubic feet of fresh air per hour, how frequently must the air of a ward measuring 80 by 30 by 20 and containing ten patients be changed?

2. An agent received a consignment of corn amounting to 3965 bushels; he sold it at 69 cents per bushel, he paid freight $95.90 and charged 2½

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per cent. commission. What was his commission, what was the amount remitted to the principal?

3. If the rate of taxation is 7½ mills on the dollar, and the tax on a farm is $69.10, what is its assessed value?

4. A traveler having gone 768 miles, and has completed 74 per cent. of his journey. How much further has he to go?

5. A owns 3/10 of a farm worth $20,576 and sells 2/3 of his share. Find the value of what he has left?

6. If 40 men can do a piece of work in 60 days, working 10 hours per day, how many men will it require to do the same work, working 8 hours a day?

7. What will be the cost of 7/8 ton of hay if 5 5/8 tons cost $136.25? Work in decimals.

8. How much will it cost to carpet a room 16 feet long by 16 feet 7 inches wide, with carpet 27 inches wide at $1.50 per yard.

9. Find the sum of 7201.65, .7, .4534, .016.

10. How long would a ton of coal last in a furnace consuming 12.5 pounds of coal per hour per square foot of grate surface, the grate being 4 feet square.

MATERIA MEDICA

1. Describe phenol. Give its use and dose.

2. What is blue vitriol chemically? Give its official name and its use in medicine.

3. What is cocaine and from what is it derived? What are its medicinal properties? In what strength is its solution used locally? What is the dose internally?

4. Name the commonly used emetics, and their methods of administration.

5. What is nitro-glycerine? How is it used? What is its dose? In what connection is it useful? What dangers, if any, are connected with its administration?

6. Discuss briefly five methods of the administration of medicine.

7. Define the following terms and give an example of each; also a disease in which applicable: Cardiac stimulant, cardiac sedative, diuretic, respiratory stimulant, disinfectant, anodyne, hypnotic, styptic, refrigerant and antipyretics.

8. What are the medicinal properties, uses and doses of potassium iodide? What are the symptoms by which its constitutional effects are noted?

9. Mention five medicinal substances that are used hypodermically and state strength of solution of each.

10. State what you know of the similarity or difference in the action of opium and hyoscyamus on the human system.

PHARMACY

1. State in full all the precautions you would take in filling a prescription containing one or several highly poisonous ingredients, for instance: Atropine sulphate, hydrocyanic acid, tincture aconiti, etc.

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2. What is meant by chemical, pharmaceutical and therapeutical incompatibility? Give an example of each.

3. How would you distinguish between quinine sulphate and strychnine sulphate? Between oxalic acid and magnesium sulphate?

4. What is meant by maceration, percolation, decantation, filtration, solution and precipitation?

5. State as fully as you can your criticism of the following prescription:

℞. Cocaine hydrochlor..... .20
Sodii Boratis..... .60
Aqua dest..... .15
S. Instil 3 drops into each eye.

6. Convert 9 ounces, 3 drachms, 10 grains apothecaries weight into the equivalents in the metric system.

7. Give a simple method of detecting fusel oil in brandy, whiskey and alcohol.

8. What means are generally used to prevent the decomposition of syrupus ferri iodidi?

9. What are glycerites? What are their principal advantages? How do you prepare glycerite of tannic acid?

10. What is fractional distillation? Destructive distillation?

CARE OF SICK AND WARD MANAGEMENT

1. Describe the preparation of a nutrient enema.

2. How would you obtain the following specimens for laboratory analysis: Urine, stool, blood for Widal test in typhoid, blood for the diagnosis of syphilis, specimen from the throat? How would you obtain a record for twenty-four hours urine?

3. Describe the method of giving a hot air bath to a knee joint. To what temperature is the bath raised? How long is it given?

4. Give the method of preparation of peptonized milk; whey; rice; gruel; beef juice.

5. How would you prepare a specimen of blood for a microscopic examination?

6. Give some of the significant signs of approaching death, the care of the cadaver and preparation for the postmortem examination.

7. Describe in detail the manner, preparation and method of applying the following external applications: Fomentations, mustard plasters, dry cups and cantharides.

8. Tell how you would manage the ward linen in order that it shall always be clean, in good repair and free from infection.

9. Write down the standing orders for ward masters.

10. Describe the ordinary method of urinalysis.

ELEMENTARY HYGIENE

1. What is the equipment of a sanitary soldier? What has your experience taught as desirable to add to it and what to leave out?

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2. What is the difference between the direct, indirect and the direct-indirect systems as used in connection with steam or hot-water heating plants? Which is ordinarily employed in military hospitals?

3. How would you dispose of garbage and how of urine and feces in a permanent camp?

4. Give some simple methods of ascertaining whether the ventilation of a ward is sufficient.

5. Describe in detail the steps necessary to prevent mosquito breeding in and around post.

6. How do you take samples of water for (*a*) chemical and (*b*) bacteriological analysis?

7. What are the rules of personal hygiene that should be observed by all soldiers?

8. What, in your opinion, are the most desirable qualities in a recruit for the Medical Department? What physical and moral defects would cause you to reject such a recruit?

9. What do you understand by a soil pipe, a vent pipe, a trap, a latrine? Describe a good type of water closet.

10. What defects in diet will cause scurvy among troops?

MINOR SURGERY AND FIRST AID

1. Describe how you would vaccinate a soldier to immunize him against all diseases for which vaccination is now practised.

2. How would you distinguish between a case of sunstroke and of apoplexy? A case of sunstroke and one of alcoholism?

3. What is the treatment for (*a*) opium poisoning, (*b*) wood alcohol, (*c*) ethyl alcohol, (*d*) aconite, (*e*) poisoning by an unknown substance.

4. What instructions would you give a member of the enlisted force, Medical Department, for applying splints to broken bones, that the fragments be held firmly in place without undue interference with the circulation of the limb?

5. What steps should be taken in case of sudden cessation of respiration during chloroform narcosis?

6. What is the object of applying first-aid treatment on the battlefield?

7. Describe the first-aid treatment of a gunshot fracture of the thigh with arterial hemorrhage.

8. Describe two methods for the resuscitation of the apparently drowned.

9. What preparations would you make to anticipate the current demands of the minor injuries constantly occurring at a post?

10. Give the varieties of fracture symptoms and treatment.

In oral examinations of candidates in the Medical Department, each member of the board marks the answers to each question; the totals are their average.

THE MESS

The administration of the mess is a matter requiring much care. Daily lists of all diets and meals served should be kept for the information

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of the surgeon and inspector. These should be countersigned by the surgeon to show that he has approved them. Such record may be kept in a book or on separate sheets of paper. It is sometimes difficult for the mess sergeant to determine what articles should be served in a dietary, for which reason the following general scheme of diets in rotation has been adopted at some hospitals. Following a routine dietary such as this saves the mess sergeant the necessity of getting up one daily, but it lacks elasticity to meet market conditions, and should therefore not be followed rigidly, but modified to use supplies available. A typical illustration of the order enjoining the use of such a diet is the following:

The following bill of fare is hereby ordered for the enlisted men, Medical Department, on duty at this hospital, and will be adhered to as far as practicable.

Deviations will be reported by the cook to the officer in charge of the kitchen.

ENLISTED PERSONNEL MEDICAL DEPARTMENT

Breakfast	Dinner	Supper
	Sunday	
Bacon and eggs	Roast veal or pork	Cold sliced roast beef or pork,
Fried potatoes	Mashed potatoes	potato salad
Bread. butter, coffee	Fresh vegetables	Pickles or beets
	Rice or corn starch pudding	Apple or peach pie
	Bread and coffee	Tea
	Monday	
Mush and milk	Soup, roast beef, gravy	Beef stew or hash
Beefsteak	Boiled potatoes	Bread and butter
Fried potatoes	Fresh vegetables	Prunes, tea
Bread and coffee	Bread and coffee	
	Tuesday	
Corn meal mush	Roast beef and gravy	Boiled beef,
Pork sausage	Mashed potatoes	Boiled potatoes
Potatoes	Fresh vegetables	Stewed apples
Bread, butter, coffee	Bread and coffee	Bread, butter, tea
	Wednesday	
Mush and milk	Soup, roast mutton, dressing	Beef a la mode
Liver and onions	Boiled potatoes	Baked potatoes
Fried potatoes	Fresh vegetables	Peach cobbler
Bread and coffee	Bread, coffee	Bread, butter, tea
	Thursday	
Beefsteak	Pork and beans	Hash or stew
Fried potatoes	Beef pie	Corn bread
Bread, butter, coffee	Radishes and onions	Syrup
	Bread, coffee	Bread and tea
	Friday	
Mush and milk	Soup, baked fish, gravy	Cold sliced roast beef
Beefsteak	Boiled potatoes	Corn bread, apple cobbler
Fried potatoes	Fresh vegetables	Bread, butter, tea
Bread and cheese	Bread, coffee	

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SATURDAY

Beefsteak	Corned beef and cabbage	Meat pie, pickles
Fried potatoes	Macaroni and cheese	Stewed fruit
Bread, butter, coffee	Boiled potatoes	Bread, butter, tea
	Bread, coffee	

Illustrative dietaries for patients are given in the chapter on "The Base Hospital."

A diet list offering many dishes from which selection may be made is the following, collated from the service of many hospitals and showing those dishes which are most generally served and which as a rule are inexpensive and desired.

ARTICLES FOR FULL DIETS

1. BREAKFAST FOODS, ETC.

Oatmeal and milk
Farina and milk
Boiled rice and milk
Cream of wheat and milk
Shredded wheat and milk
Corn flakes and milk
Corn meal mush and milk
Grape nuts and milk
Hot cakes and syrup
Dry toast
Buttered toast
French toast
Milk toast
Puffed rice

2. SOUPS

Beef soup
Rice tomato soup
Macaroni soup
Potato soup
Chicken soup
Barley soup
Oyster soup
Vegetable soup
Rice soup
Tomato soup
Pea soup
Cream tomato soup
Vegetable puree
Bean puree
Cream puree
Mutton broth
Chicken broth
Oyster broth
Clam broth
Fish chowder
Codfish chowder
Oyster chowder
Potato chowder
Vermicelli soup

3. MEATS

Beefsteak pie
Beef, cold roast
Beef roast, loin of
Beef chipped, creamed
Cod fish, stewed
Mackerel, creamed
Beef, short ribs of
Beef, canned, corned
Beef, corned
Beef, a la mode
Beef, spanish style
Beef, with curry
Beef, roast, dry
Beef, roast, soft
Beef, pot roast
Beef, boiled
Beef, stewed
Beefsteak, fried
Beefsteak, boiled
Beefsteak, broiled
Beef, brazed
Beef, omelet
Beef hash
Beef loaf
Beef tamales
Beef fritters
Beef croquettes
Beef rolls
Beefsteak pot pie
Beef with chili
Beef, corned hash
Veal loaf
Veal, roast and stewed
Ham, boiled
Ham, fried
Pork, baked sausage
Pork chops, fried
Pork, spareribs of
Mutton chops, fried
Mutton, stew
Mutton, boiled
Chicken, creamed
Chicken, roast
Chicken, stewed
Chicken, fricasseed
Chicken pot pie
Chicken, broiled
Bacon, fried
Liver, fried
Pigs feet, pickled
Weinerwurst, steamed
Duck, roast
Salmon, baked
Salmon croquettes
Salmon, canned
Fish, fresh
Salmon, creamed

4. EGGS, ETC.

Eggs on toast
Eggs, soft boiled
Eggs, fried
Eggs, poached
Eggs, scrambled
Egg omelet
Egg, parsley omelet
Eggs with brains

5. VEGETABLES

Minced potatoes
Creamed potatoes
Hashed brown potatoes
Baked potatoes
French fried potatoes
Lyonnaise potatoes
German fried potatoes
Fried potatoes
Steamboat potatoes
Cheesed potatoes
Escalloped potatoes

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Stewed potatoes
Boiled potatoes
Steamed potatoes
Mashed potatoes
Potato croquettes
Potato, sweet, baked
Onions, sliced
Onions, young
Onions, creamed
Onions, fried
Onions, stewed
Beans, baked
Beans, string, creamed
Beans, string, stewed
Sauerkraut, boiled
Cucumbers, sliced
Cold slaw
Beets, pickled
Beans, lima
Radishes
Corn on cob
Corn, stewed
Succotash, stewed
Peas, green, stewed
Asparagus, creamed
Asparagus, buttered
Cabbage, boiled
Turnips, tops, boiled
Turnips, baked
Turnips, mashed
Tomatoes, stewed
Tomatoes, sliced
Spinach, boiled
Lettuce
Celery
Cauliflower

6. Desserts

Rice custard pudding
Cottage pudding
Blanc-Mange pudding
Bread custard pudding
Sunday pudding
Tapioca pudding
Apricot pudding
Rice pudding
Bread pudding
Sago pudding
Peach pudding
Chocolate pudding
Squash pie
Mince pie
Cocoanut pie
Apricot pie
Apple pie
Strawberry pie
Custard pie
Lemon meringue pie
Pumpkin pie
Peach pie
Blackberry pie
Huckleberry pie
Cocoa meringue pie
Sweet potato pie
Pineapple pie
Raspberry pie
Raisin pie
Queen cake
Peach short cake
Cup cake
Lady Washington cake
Strawberry shortcake
Sponge cake
Apple cake
Plain cake
Fruit cake
Coffee cake
Ginger cake
Plum duff
Strawberries
Apple sauce
Sliced bananas
Boiled rhubarb
Fresh fruit in season
Blackberries
Various jellies
Oranges
Cantaloupes
Watermelon
Canned peaches
Stewed peaches
Stewed prunes
Stewed apples
Stewed apricots
Pineapple ice-cream
Strawberry ice-cream
Coffee ice-cream
Vanilla ice-cream
Chocolate ice-cream
Baked egg custard

7. Drinks

Iced tea
Hot tea
Coffee
Cocoa
Lemonade
Milk
Iced tea with lemon

8. Cakes, Buns, Etc.

Vienna rolls
Corn muffins
Twist rolls
Tea buns
Parker House rolls
Hot ginger bread
Graham wafers
Hot biscuits
Crackers
Hot corn bread
Cinnamon rolls
Crullers
Sandwich buns
Cream puffs
Sweet muffins
Ginger muffins
Apple cobbler
Apple kuchen
Jenny Linds
Doughnuts
Cup custards
Apple tarts
Ginger cake

9. Miscellaneous

Bread
Butter
Creamed cheese
Pickles
Chow chow
Macaroni and cheese
Baked beans
Stuffed olives
Sage dressing
Onion dressing
Pickled green tomatoes
Catsup
Worcestershire sauce
Tomato sauce
Egg sauce
Milk sauce
Lemon sauce

ARTICLES FOR LIGHT DIET

1. Breakfast Foods

Oatmeal and milk
Farina and milk
Cream of wheat and milk
Boiled rice with milk
Shredded wheat and milk
Corn flakes and milk
Grape nuts and milk or cream
Boiled hominy and milk
Cornmeal mush and milk

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Quaker oats and milk
Rolled oats and milk
Boiled germea and milk
Corn flakes and milk
Wheat flakes and milk

2. Soups and Broths

Beef soup
Vegetable soup
Rice tomato soup
Macaroni soup
Corn soup
Puree of bean soup
Mock turtle soup
Chicken soup
Noodle soup
Pea soup
Oyster soup
Cream of tomato soup
Beef broth
Clam broth
Mutton broth
Barley soup
Vermicelli soup

3. Meats, Fish and Eggs

Chicken pot pie
Chicken, creamed
Chicken, fricassied
Chicken, roast
Chicken, stewed
Beef, chipped
Beef, chipped, creamed
Codfish, stewed
Codfish, creamed
Codfish, fried
Codfish cakes
Codfish, creamed, shredded
Salmon, creamed
Salmon, baked
Salmon, canned
Salmon croquettes
Mackerel, creamed
Mackerel, baked
Sardines
Oysters, scalloped
Oysters, stewed
Oysters, fried
Ox tongue
Eggs, soft boiled
Eggs, scrambled
Poached eggs
Eggs, poached on toast
Egg omelet
Eggs, scrambled
Macaroni and cheese
Gravy, meat
Gravy, cream
Gravy, chicken

4. Vegetables

Creamed potatoes
Baked potatoes
Mashed potatoes
Creamed onions
Creamed asparagus
Stewed corn
Stewed tomatoes
Sliced tomatoes
Green peas
Lettuce

5. Bread Stuffs

Bread
Hot biscuits
Crackers
Corn meal muffins
Parkerhouse rolls
Graham wafers
French toast
Milk toast
Buttered toast
Dry toast, etc. (see list above)

6. Desserts

Custard pudding
Bread custard pudding
Rice custard pudding
Chocolate pudding
Blanc-Mange pudding
Corn starch pudding
Cabinet pudding
Tapioca pudding
Rice pudding
Sago pudding
Bread pudding
Cup custard, egg
Cup cake
Strawberry short cake
Apple short cake
Small cake
Sponge cake
Jelly cake
Ginger bread
Ginger snaps
Stewed prunes
Stewed apples
Stewed peaches
Various jellies
Sliced bananas
Fresh fruit in season
Peach sauce
Apple sauce
Pineapple ice cream
Lemon ice cream

7. Sweet Sauces

Milk sauce, cream sauce
Egg sauce, lemon sauce

8. Miscellaneous

Hot tea, iced tea
Coffee, cocoa
Milk, chocolate
Eggnogs
Lemonade
Butter

ARTICLES FOR LIQUID AND SPECIAL DIETS

Liquid Diet

Beef broth
Oyster broth
Strained broth
Chicken broth
Fish broth
Clam broth
Mutton broth
Gélatine
Orange jelly
Oyster soup
Rice soup
Tomato soup
Tomato cream soup
Cream potato soup
Beef juice
Milk punch
Wine jelly
Pineapple jelly
Oatmeal gruel
Farina gruel
Arrowroot gruel
Eggnoggs
Iced tea
Hot tea
Egg milk punch
Currant jelly
Strawberry jelly
Coffee
Cocoa
Chocolate
Fresh milk
Malted milk
Albuminized water
Albuminized lemonade
Lemonade
Raspberry jelly

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SPECIAL DIET

1. BREAKFAST FOODS

Oatmeal and milk
Boiled rice and milk

2. SOUPS

Beef soup
Tomato soup
Mock turtle soup
Rice soup
Ox tail soup

3. MEATS

Beef (in form prescribed)
Mutton (in form prescribed)
Bacon
Roast chicken and other poultry
Stewed chicken
Fresh fish
Codfish
Baked mackerel
Salmon
Chipped beef
Hamburger steak
Creamed mackerel
Sardines
Meat pie
Fried ham
Oysters
Baked beef hash
Beefsteak
Gravies

4. VEGETABLES

Mashed potatoes
Creamed potatoes
Boiled potatoes
Fried potatoes
Lettuce
Sliced tomatoes
Stewed tomatoes
Cold slaw
Creamed asparagus
String beans
Stewed peas
Boiled spinach
Cabbage
Green onions

5. EGGS, ETC.

Soft boiled eggs
Poached eggs on toast
Macaroni
Ham omelet

6. DESSERTS

Apple pie
Ginger cake
Bread pudding
Tapioca pudding
Dried apples
Dried peaches
Dried apricots
Sliced oranges
Stewed prunes
Pineapples
Peaches
Cherries
Canned fruit
Ice cream

7. BREAD STUFFS

Bread
Hot biscuits
Crackers, toast

8. DRINKS

Iced tea
Hot tea
Coffee
Cocoa
Chocolate

Obviously, some articles mentioned in any one of the foregoing list can also be used in others.

Good cook books for use in hospital service are the White House Cook Book or that by Mrs. Rorer. There should be a copy of one of these, or other standard cook book in each hospital for the use of the mess sergeant and head cook. Other excellent books are the "Manual for Army Cooks" and "The Mess Officer's Assistant" by Captain Holbrook.

In large hospitals there should be installed a kitchen table of the pattern devised by Captain Holbrook, U. S. A. These cost about $115 each. They are made of metal and are sanitary, convenient, and serviceable.

Instruction to sergeants of the Medical Department is given at the Cook's and Baker's School at Fort Riley, at the Presidio of San Francisco and at other points. Such courses of instruction are of proven value, and it is believed that a certain quotum of sergeants of the Medical Department should be detailed to attend these schools annually.

Mess accounts are kept on Form 74, M.D., and monthly statements accompanied by vouchers are forwarded to the department surgeon.

The hospital fund is augmented in various ways. Thus at the hospital at Fort Riley, a herd of six cows brought in a profit of $800 in six months; from a number of pigs a profit of about 100 per cent. on the investment was made in five months, and the income from the pool and billiard tables averaged about $15 a month. A saving can be effected if the mess be so managed that but little meat be bought and much pastry be made. Meat

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is expensive and a certain amount can be eliminated from the American dietary without injury. It should be replaced, however, by pastries which are appetizing and well liked. Such substitutions, however, should be transient and not permanent.

An energetic mess sergeant can promote greatly the contentment of the enlisted men, Medical Department, and secure to the detachment transfers from the line, that would not otherwise be possible. Thus Sergeant Wilfred Bishop at Malabang, P. I., a remote station in the southern islands, bought chickens and eggs at a point 50 miles away and had them brought to the post at one-third the local price. He ordered various articles from the United States and from Hong Kong, all at a material saving or adding much to the variety of the mess. Upon his success was in large part due the fact that there was a waiting list of forty-three applicants for transfers from the line to the Hospital Corps—a fact which demonstrates how much more prized a position is if its tenure implies obtainment of good food. Members of such detachments are as a rule diligent, if for no other reason than the hope of retaining their assignments.

SICK CALL

Sick call is usually held shortly after breakfast. There are several manifest advantages in having this function at this time when the sick of each organization come to the hospital for treatment. They then are disposed of for the day and do not incommode the performance of company duties; if ordered into the hospital, they have time to go to their organizations and lock up their effects, return to the hospital and be ready for the surgeon at his morning rounds. Appropriate orders affecting them are then given and complied with during the forenoon. In some posts sick call is held at 1:00 P.M. The advantages of holding it at this time are not so apparent but are none the less well worth considering. As a rule possible patients will have performed much of their day's work and will have no incentive for coming on sick report if not actually in need of medical attendance. The sense of indisposition which a man may have felt earlier in the day will have worn off. The sick, at this time, will receive more careful attention and probably longer individual consideration than can be given them at an early sick call, when the day's work is yet to be done and there is no time for protracted examination of patients. Sick call should not be relegated to a junior surgeon. At West Point it is taken by the ranking medical officer, a lieutenant colonel. It is a very important function. Medical officers newly entering the service should attend it in the company of some other experienced officer and receive instruction in the manner in which it should be performed.

A separate sick report book should be kept by the surgeon for the medical officers and members of the Medical Department.

WARD MANAGEMENT

The wardmaster and nurse must give special attention to the following duties, viz.:

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The administration of medicines, diets, and other treatment ordered, the cleanliness, care and comfort of the patients, the accuracy of records, the care of property, the cleanliness of the ward and its contents, and the preservation of discipline. The proper execution of these various duties evidently requires a superior class of service and only reliable men should be detailed for their performance. Those who have studied Mason's "Handbook" and have qualified, who have had previous experience as wardmasters or as subordinates in ward service, should be selected as wardmasters. The administration of medicine and diets and other treatment, etc., is similar to that in civil hospitals and does not properly require discussion here.

The general rules governing the disposition of patients are prescribed in the Manual for the Medical Department.

A clinical record should be opened for each patient. These records for each ward are kept on Shannon files. Their sequence in this file is the same as that in which occupied beds occur in the ward, beginning on the right.

The wardmaster writes the surgeon's orders on the chart. Before he leaves the ward the visiting surgeon should verify these entries. In all serious cases the surgeon should write his orders himself.

So far as possible, dressings should be applied in the wards or dressing room and the operating room used only for operations. Diets should be served to patients in the wards.

The surgeon writes and signs prescriptions for all medicines, dressings, supplies, etc., to be used in the ward. These then go to the dispensary.

For his own convenience the wardmaster often keeps a book into which he makes a daily transcript of the orders for his patients. This is in reality a consolidated digest of his day's orders. Thus there appear in sequence in this book the names of all patients, and opposite the names of each, on the same line with it, a statement of the medicinal and dietetic treatment to be given. This book is a relic of ward management as conducted before individual records were used and is unnecessary but seems convenient.

The wardmaster only should administer medicines and apply simple dressings or, in his absence, his assistant. Stock prescriptions, stimulants, and instruments should be kept in a cabinet in the ward. The surgeon should assure himself on his daily inspections that these stock prescriptions are adequate for the day's use, that thermometers are properly sterilized, and that the hypodermic syringe and other surgical instruments and appliances in the ward are in serviceable condition. Bed pans and urinals should be sterilized after use by liquor cresolis comp. and placed in a rack provided for that purpose in the closet. Stools should be disinfected by thorough mixture with a 5 per cent. solution of liquor cresolis comp. leaving them exposed to its action for one hour.

Once each week the wardmaster should check all property in the ward and turn into the record office a report on the same. Any statement of any loss, damage or surplus should be investigated on the day on which this

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report is rendered. From time to time the surgeon in charge of the ward should himself check over the property to assure himself that it has not been reported upon in a perfunctory manner. Each wardmaster should have a list of the kinds of medical property furnished and charged against him for use in the ward, and the quantity of each. This is in fact a copy of his memorandum receipts.

The wardmaster should also keep a linen book in which entries are made daily of the character and number of all washable articles including blankets which are sent out of the ward for laundry, or returned to it. For each article turned into the linen room another of the same kind should be issued to the ward.

Daily laundry lists should be scrutinized to determine whether a proper or excessive amount of laundry is used in any ward.

The wardmaster also keeps a night order book into which he copies all orders affecting treatment of patients during the night; this book he signs and gives to the night nurse in person.

Patients suffering from infectious diseases must be isolated promptly. Their clothing other than leather and woolens must be disinfected by immersion for one hour in boiling water. The excepted articles should be disinfected by immersion for three hours in 2 per cent. phenol or acid mercuric chloride solution. All their bedding, linen, towels and other utensils should be similarly disinfected after use by the patient. Mattresses and pillows should be disinfected by steam or formaldehyde. Attendants should wash their hands in mercuric chloride solution (1–1000) after contact with the patient or articles used by him.

Patients are required to wear hospital clothing. This rule subserves several useful purposes—one of which is the fact that it prevents patients leaving the hospital without permission.

It is a generally recognized custom of the service that patients in wards will obey the orders of the wardmasters. Sometimes, however, this has been called in question as for instance when a wardmaster with the rank of private, first class, has directed a noncommissioned officer to clean up in the vicinity of his bed. The ground has been taken that such an order is invalid, since the surgeon can give no order except to subordinates in his own department, and because the noncommissioned officer in this case was higher in rank than the party giving the order. The wardmaster, however, like a sentry on duty, is acting by delegated authority and in pursuance of it. In order to forestall such incidents, however, it is well to have the rules governing patients approved by the post commander.

Convalescent patients should be afforded various means of diversion. Thus, they should be allowed to use the literature in the library of the Medical Department detachment. A phonograph is often much appreciated. In some posts the surgeon asks the commanding officer that concerts be given at the post hospital by the band once weekly. The sick appreciate this attention. Post commanders usually accede to this request with alacrity. In good weather convalescent patients are taken out for

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rides in the ambulance. Surgeons differ as to whether patients should be allowed to use tobacco or to play cards in the hospital. Some forbid such practices absolutely, others allow them with certain restrictions, *e.g.*, the use of tobacco is permitted only at certain times or on the verandas, or in the ward if such use does not impair the cleanliness of the ward. Card playing is permitted by some surgeons, but not for a stake nor with members of the Medical Department. Games, other than those with cards, are usually allowed. Chaplains sometimes give the men lantern shows. If possible, patients should be kept occupied to a degree in some profitable employment. The preparation of dressings and sponges for use in the operating room is both educative to the patients and of service to the hospital. Police work about the wards affords some beneficial light exercise to convalescents.

Sometimes the treatment accorded patients is questioned and complaints are made against the medical service of the post. Such complaints are much more common in some organizations than in others and are often an expression of the attitude of the command toward the Medical Department as a whole. Sometimes such complaints are legitimate, sometimes they are the result of ignorance, and in others they are the result of an habitual attitude toward a department whose services are, to the recipient, gratuitous.

In the event of complaint being made the surgeon should not seek to evade investigation by persons qualified to judge of the merits of the case. If the complaint be unfounded the surgeon will be vindicated, if it be well founded, corrective action will be taken anyhow. There is much to gain and nothing to lose by candor and frankness. Often the commanding officer of the post adjudicates the subject or appoints a board usually of line officers to investigate it. Unfortunately the tenure of authority to adjudicate a matter does not inevitably carry with it ability to do so. Though they approach a technical subject in medicine with the most open minds, and in the best spirit, as they undoubtedly usually do, line officers often lack the technical education which would qualify them to reach a just decision on questions in which medical technicalities occur. It would be quite as reasonable to call upon medical officers to adjudicate engineering or ordnance questions, or questions of strategy. Preconceived opinions, traditions, sympathies, half knowledge and especially catch words, obscure the judgment in such cases, though the investigators approach the subject with the most sincere desire for justice. A background of exact knowledge and experience is essential. The fear that departmental solidarity would obstruct the obtainment of justice, if complaints affecting the medical service were referred to other medical officers for investigation has not been justified in the past, nor is there danger that it would be in the future.

Questions affecting the proper treatment of patients should be referred to disinterested medical officers for investigation and disciplinary action, if such prove necessary.

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ORDERLY

If the hospital be large enough to require the detail of an orderly for the senior surgeon, the orders given him are usually few—that he will receive orders from the surgeon only, will obey such orders promptly, will answer all telephone calls while on duty and report to the surgeon all messages received for him or other persons connected with the hospital, will care for the surgeon's office and the record office, be responsible for the correctness of the office clocks, and will, when going off duty or on an errand, turn over to his successor or his relief such standing or special instructions as he may have received. Usually one man is detailed for constant duty as orderly—there is not a daily change as in the line. Also, when the orderly goes off duty, he should be relieved by a man habituated to such relief. When the orderly is given a verbal message to deliver he should be required to repeat it before he leaves the surgeon.

The orderly on duty in the hallway should not leave his post of duty unless properly relieved or on order of the surgeon, then he will notify the office so that his alternate can be notified.

DISPENSARY

A cabinet should be kept in the dispensary or dressing room, if the latter is provided, and in this should be arranged the instruments, appliances, etc. mentioned below. Such minor surgical cases as require attention at sick call should be cared for in the dispensary or in the dressing room.

Emergency case	1	Obstetric case	1
Hot-water bottles	2	Case, tooth extracting	1
Fountain syringe	1	Bags, rubber, ice for head	2
Hypodermic syringe	1	Cupping set	1
Pad, surgical, Kelly's	1	Sheet, rubber	1
Thermometers, clinical	2	Electric battery	1
Stethoscope	1	Tube, stomach	1
Catheters, rubber, assorted	3	Gloves, rubber, pairs	1
Towels, hand, sterile, packages	2	Pouch, orderly	1
Gauze, sterile, packages	12	Bandages, assorted	20
Cotton	12	Basins	2
Basins, pus	1	Collodion, bottles	1
Brushes, hair camel	1	Pins safety, papers	1
Adhesive plaster, spools	1	Iodine, tr., bottles	1
Argenti nitras, fusus, bottles	1	Needles, assorted	6
Ligatures, silk, catgut, assorted		Ligatures, silkworm, horse hair	

Such of these articles as may be required elsewhere than in the dispensary should be issued on memorandum receipt or on the prescription of a medical officer, but in cases of emergency, they should be issued without formality. In such event, however, the party causing their issue, should cause them to be recovered promptly as soon as the emergency has passed.

There are several reasons for this practice, but the most apparent are the following:

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Usually the dispensary is more convenient for minor surgical operations and applying dressings at sick call than is any other room in the hospital; if the dispensary be used for these purposes, this practice helps to prevent the usage of the operating room for other purposes than those for which it is properly intended; it prevents the hospital being tracked up and prevents unusual noise and confusion except at the entrance of the hospital only.

The following articles for use in the obstetrical bag should be kept assembled on hand in the dispensary. Immediately after their use in any case, unexpended articles should be returned to the dispensary.

The instruments should be cleaned promptly and all expended articles renewed under the personal supervision of the noncommissioned officer on duty in the dispensary.

OBSTETRICAL BAG

Inhaler chloroform	1
Catheter, rubber, No. 10	1
Basin, small, white enamel	1
Syringe, rubber, fountain	1
Needles for hypodermoclysis	2
Sutures, silkworm gut, skeins	1
Gloves, rubber, pairs	1
Bandages, T, No.	3
Pads, gauze, sterile, large, packages	1
Pads, cotton, sterile, packages	1
Sponges, gauze, assorted sizes, packages	2
Towels, sterile, dozen	1
Bandages, No.	6
Gauze, iodoform, backages	1
Phenol, C.P. in 30-c.c. bottles	1
Adrenalin solution in 30-c.c. bottles	1
Sheet, rubber 6 × 4	1
Gelatine, box	1
Argenti nitras 2 per cent. sol. 30-c.c. bottles	1
Medicine droppers	1

Loitering in the dispensary should be forbidden.

The Medical Department man on duty in the dispensary should, in the absence of the noncommissioned officer in charge, prescribe nothing except drugs which they have a special permission to issue.

All prescriptions should be filed and numbered serially (see chapter on "Base Hospital"). The person who fills the prescription should place his initials immediately beneath the number. No prescription should be refilled without an order from the medical officer who originally prescribed it or the surgeon, and in cases when a prescription is refilled, the man who filled it should enter on the original prescription, the date, and authority for such refilling, signing his initials. Prescriptions of physicians not on duty at the post if approved by a medical officer of the post should be filled, but no property of any description whatsoever should be issued without a prescription from an authorized individual.

Supplies required in the dispensary should be requisitioned for on

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issue slips, Form 16*a*, M.D., every requisition to be signed by the surgeon; provided that in case of emergency, the noncommissioned officer in charge should draw the necessary drugs, and the surgeon's authority obtained for such issue as soon thereafter as possible.

Owing to the limited number of Medical Department men on duty in a post hospital, orderlies for the delivery of medicines in the post or to run errands are not furnished. In emergencies, the senior noncommissioned officer in charge of quarters details some available man for that purpose.

The orders of unauthorized persons desiring drugs or other medical property are invalid. Respectful answers should be made in explanation, citing the orders of the dispensary and hospital.

The key to the dispensary should be kept on the premises and in the possession of the sergeant in charge of the dispensary or the noncommissioned officer in charge of quarters.

OUTSIDE POLICE

Certain men are detailed to duty with the outside police, or fatigue. Those selected for this detail are usually those who have but scant aptitude for other duties but there are numerous exceptions to this rule. Thus, men who have had long tours of duty in the ward or office sometimes ask for such duty because it is less confining. The essential duty of the outside police is to keep the premises clean, but they are often called on to perform other services. They are the most mobile part of the detachment, and can be assigned to emergencies with less disarrangement of hospital routine than can other members of it. Such emergencies are unexpected calls because of accidents in the post, fire, assistance in the removal and care of the bodies of those deceased. They perform such other duties as handling garbage cans, putting fuel into the cellar, unloading and loading wagons containing supplies, etc.

GARDENER

A gardener is selected from the corps in many posts, to care for the hospital garden. Unless the man thus detailed be unusually diligent or carefully watched he is prone to evade his duties. Obviously, one who has had experience in farming, or better in market gardening, and who is strong and industrious should be selected. Prior to his detail the gardener should be informed that should he fail to obtain from the garden a return equal to his pay and his gratuity he will be tried for neglect of duty. This admonition should permit of exception if there be drought, locusts or other calamity.

The pay of the gardener is supplemented sometimes, on the authority of the department surgeon, by the payment of a monthly gratuity not exceeding $10 from the hospital fund. If the surgeon should ask the department surgeon for authority to pay this sum he might also ask, with advantage, to be permitted to withhold the payment of this gratuity until after

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all the produce from the garden has been received. Payment may then be made or withheld according as the gardener has done his work well. The department surgeon's action in granting authority to pay does not compel the surgeon to do so.

A book should be kept in which are entered daily the supplies brought to the hospital or sold, the value of the latter or current market rates, and cash received. This account should be checked and initialed daily by the cook and by the sergeant in charge of the mess.

REGULATIONS FOR THE GOVERNMENT OF POST HOSPITALS

The regulations for the administration of a post hospital are determined by a number of conditions, which, under different circumstances, have widely different relative values. Illustrative regulations are given in the Manual for the Medical Department, others can be adapted from the chapters on the "Camp Hospital" or "Base Hospital." Among conditions determining the character of orders are the size of the hospital, the character and the number of cases which receive treatment, the number, professional efficiency, and military experience of the sanitary personnel on duty, the size of the command to which the hospital pertains, etc.

While methods of individual officers may differ, the end results which they seek are so highly similar that rules enunciated for one set of circumstances are with some minor changes in detail highly adaptable to others apparently much different.

In many hospitals published orders are few but they are supplemented by the traditional practices of the institution. Such practices have in effect the local force of common law. But as the Army is administered in general under the principles of the statutory law, as men newly arrived or enlisted are not acquainted with the traditional practices of their station, and as such practices often are but vaguely understood or are liable to erroneous interpretation, it is better, so far as practicable, that these customs of the service be replaced by specific orders. Such orders should be adequate and definite in scope, direct, exact and clear in purport, concise in form, few as possible, yet sufficient in number and mutually coherent.

The following is, in brief, a digest of the hospital duties of the senior medical officer of a post. It is adapted from the regulations of the U. S. Navy, which require that the medical officer in command of a hospital shall be responsible for the care and treatment of the sick, and for the discipline, cleanliness, economy and general management of the institution. It is further required that medical officers and all persons employed in the hospital shall perform such duties as shall be assigned them by the medical officer on duty, and to this end he is to exact from subordinates, employees and patients, a proper obedience to his orders and to the laws and regulations of the Army. He should keep himself informed of all orders, circulars, and regulations issued by higher authority relating to the administration of military hospitals. Also he should see that they are complied with.

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He must therefore effect all details of organization, police, inspection and discipline of the subordinate personnel as he is responsible for the good order and preservation of buildings and grounds. He must do his utmost to render all departments of the hospital efficient. He must personally supervise all work, repairs, etc., that may be done, and report to the Surgeon General as to their progress or defects. The surgeon receives all orders relating to the general duties of the hospital, from the commanding officer, or higher authority, and transmits them to his subordinates as may be necessary. He is responsible for the execution of such orders. He should permit no change to be made in the hospital buildings, furniture, and grounds, except in emergency, and contract no bills for purchases and repairs without the permission of the Surgeon General, except in special exigency. He should require that all medicines and medical supplies that may be received at the hospital be inspected and their condition reported to him by an officer entrusted with this duty. Such provisions as are received should also be inspected frequently. He must inspect daily all parts of the hospital, at an hour designated by him, and should see that the halls, mess rooms, operating room, wards, storerooms, etc., are in order and that the wards are prepared for the day. The hospital should be ready for inspection at all times. At such inspections he should be accompanied by the junior medical officers through their respective departments and they should then call his attention to any important change or matter of professional interest they may have observed in their patients. All matters of interest brought to his attention during his inspection, and requiring subsequent action should be noted in a book kept for that purpose. He should see that the operating room and its appurtenances are in readiness for immediate use, that every precaution is used to maintain instruments in good condition, that ample dressings are prepared and sterilized, and that the sterilizing apparatus is kept in efficient working order. He should see that the infectious disease and isolation wards are in readiness for the reception of patients. He is responsible for the condition of the laboratories and should allow no unauthorized person access to them. He should see that the fire apparatus is ready for instant use and prepare a fire order prescribing therein the duties of the Medical Department men and such convalescent patients as may be available, and have it posted in a conspicious place, making such changes as may become necessary from time to time. He should see that all are conversant with their stations by exercise at fire quarters at such times as he may direct. He should see that every mechanical facility is afforded for protection of the hospital buildings against fire. He should supervise the preparation of returns, requisitions, bills, etc. He must suppress disorder, correct abuses, and prevent violation of discipline, and in the event of any demonstration of inefficiency, negligence, or in the case of infraction of discipline on part of his subordinates or inmates of the hospital, take such corrective action as may be adequate. He should sign passes of all enlisted patients and employees to whom passes are granted, and cause such passes to be delivered upon the return of the bearers to the n.c.o. on duty.

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This latter must note upon them the hour of return and condition as to neatness and sobriety of the holders. This surgeon should have these passes and the pass book delivered to him at a designated time for his approval. The surgeon should promptly discipline all absentees without leave or other delinquents. He should appoint attendants upon the several messes, and give special attention to the kitchen, cooking utensils, mess account, mess room, mess gear, and mess furniture, and require the mess attendants to keep them in good order. He should grant with the assent of the post commander permission to the junior medical officers and others to leave the premises, but such leave should not extend beyond 8 : 00 A.M. the following day. In exercising a general supervision over the junior medical officers if it appear necessary, he should report any inattention to duty or insubordination on their part. He should see that the junior medical officers attached to the hospital are afforded ample opportunity for practical medical work, and cause them to avail themselves of the same. He should cause the hospital force, when practicable, to be instructed and exercised not less than once a week in field instruction and in first aid. He should see that all members of the Medical Department are thoroughly drilled and instructed in their duties. He has general supervision of all patients and should keep himself informed of their condition. He should cause beds to be assigned to incoming patients and distribute them in such a manner as to allot, as far as practicable, equal numbers to the medical officers in charge of the several wards. He should see that the regulations governing the admission and discharge of patients from the hospital and preparation of all official papers for the internal administration of the hospital are strictly complied with. He should keep himself informed of the probable necessity for the performance of major surgical operations, and unless there are urgent reasons to the contrary no operations of this class should be performed without his approval. He should, if practicable, be present at all major surgical operations He should hold himself in readiness at all times to consult with and advise the junior medical officers with regard to patients under their charge, and to direct, if he deems it necessary the treatment of such patients. He may under the permission of the commanding officer, detail convalescent patients for necessary light work about the hospital, but should not assign any patient having venereal disease, tuberculosis, or any offensive or contagious disease to duty in the kitchen or as nurse or attendant upon other patients. The senior surgeon on leaving the reservation should notify the medical officer next in rank.

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CHAPTER XV

THE DEPARTMENT SURGEON'S OFFICE

The duties of the surgeon of a Territorial Department are indicated in the Manual for the Medical Department. So much of the following as concerns itself with the mechanism of his office was furnished by Mr. J. W. Cleave, Chief Clerk of the Department Surgeon's Office, Southern Department.

The object of the office is to promote team play in the department. It looks first to keeping troops well; second (failing in this), to cure them as quickly as possible; and third (failing in this), to discharge them. To get good team play there must be an efficient personnel. To obtain this, training of the sanitary personnel is of the highest importance. In order to attain the above-mentioned objects, the work of the department surgeon's office is divided into six divisions, which indicate broadly the administrative duties of the department surgeon.

Correspondence	Sick and wounded
Finance	Property
Personnel	Records

CORRESPONDENCE

All mail received in the office, whether from the post office or by messenger, is stamped by the receiving clerk. He distributes the routine reports, etc., to the different desks to which they pertain. All telegrams and all mail not obviously routine is put on the desk of the chief clerk. Telegrams are attended to at once, the balance of the mail first going through the record division. Much of the mail is disposed of by stock indorsements. All problems go to the department surgeon, himself, who indicates the reply.

To lessen correspondence, office circulars are freely used. The office issues a numbered series of circulars, many surplus copies being mimeographed, each number being filed in a manila folder in a standard filing case of the new decimal system. Upon opening each new station or organizing each new unit a complete file of office circulars is furnished, thus supplementing the general regulations and keeping everyone concerned up-to-date.

Similarly, when papers are received, which are hopelessly incorrect or incomplete, the appropriate circular covering the case is sent, instead of retyping the particulars. This is especially applicable for organizations of the Militia and Reserve Corps. For instance: Directions for preparing sick and wounded reports; schedule of instruction prescribed for all officers

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of the Medical Corps below the grade of major, and all officers of the Medical Officers' Reserve Corps in this department; the various supply letters from the Surgeon General's office or letters containing new requirements; regulations regarding ratings; alphabetic index of nomenclature of diseases, etc.

All special orders respecting the Medical Department are prepared in the office of the department surgeon. Paragraphs and numbers of orders are ascertained by telephone and the Medical Department personnel are moved, or other action is taken in accordance with the needs of the service. In like manner telegrams and letters to the Adjutant General of the Army pertaining to medical officers are prepared in the department surgeon's office, being initialed by the department surgeon and signed by the department commander, or one authorized to sign for him. Similar action is taken with letters and telegrams addressed to subordinate military commanders.

FINANCE

Vouchers for supplies and services are all closely scrutinized before being approved for payment. Defective vouchers, if they contain sufficient data, are often written up in the department surgeon's office. Doubtful and unusual vouchers are forwarded to the Surgeon General of the Army for his administrative action.

Hospital fund statements are also closely examined. Attention is paid to balances on hand, excessive expenditures and changes in the return of durable property.

Estimates for construction and repair of hospitals and construction and repair of hospital steward's quarters are gone over with great care.

The weekly morbidity report is tabulated and telegraphed every Saturday to the War Department.

Carbon copies of all sanitary reports are filed under each station, constituting the medical history of each post, etc. All recommendations on a sanitary report are promptly attended to, so that remedial action is taken.

Sanitation falls more naturally under the sick and wounded division than under finance, but reports concerning it are included, in desk work, with the former because of the respective volumes of work.

PERSONNEL

A department surgeon's directory card is made for every member of the Medical Department. In the case of officers of the Medical Corps, Medical Officers' Reserve Corps, Dental Corps, Veterinary Corps and Army Nurse Corps, each directory card is enclosed in a document file jacket such as was used in the old system of correspondence. In this jacket all monthly and special personal reports, special orders, etc., affecting the person, are enclosed. It has not been found necessary to use jackets for the records of enlisted men of the Medical Department. Changes of

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status are checked with the return of the enlisted men, Medical Department. Carbon copies of the bimonthly return of the enlisted men, Medical Department, are kept on file.

A station list of troops in the department, and a station list of the medical personnel in the department, each kept up to date, are constantly available.

The directory cards are filed alphabetically. Other cards are made for the personnel of each station, different colors being used for commissioned officers, noncommissioned officers and privates.

A similar set of jackets, directory cards, and station cards are kept for the organized militia called into the federal service.

The returns of medical officers, for regulars and militia, are made about the tenth of each month. In writing these returns the missing personal reports are revealed and accordingly written for.

SICK AND WOUNDED

In the Southern Department a printed slip with organization, card number, and the twenty-six columns of the report cards is used for the correction of faulty cards. A check against the column to be corrected indicates the error with the least possible waste of time and effort. Each card is examined several times, once for the upper third of the card, again for the diagnosis, line of duty, and sequelæ, and again for the remainder of the card.

Each report is carefully abstracted. Admissions for the principal diseases are recorded. Numbers of days lost are verified and tabulated. A list of the dead with causes and list of cases discharged for disability with diagnosis and whether or not in line of duty are kept in connection with the sick and wounded division.

The statistics compiled in this division furnish many of the essential data for the calendar year report and the fiscal year report.

The ninety-day reports are examined and cases are disposed of appropriately.

The tabulation in the sick and wounded division is periodically inspected in connection with the venereal situation. Stations showing that more than 10 per cent. of their non-efficiency rates are due to venereal diseases are required to report whether the orders formulated to control these diseases are observed, and whether soldiers neglecting to take the prophylactic are brought to trial.

PROPERTY

Requisitions for medical, dental and veterinary supplies are closely scrutinized and scaled to the allowances of the various supply tables. The office copies are filed by station. While wastefulness is guarded against, great care is taken to insure that a sufficiency of all supplies and equipment are on hand.

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Blank forms, typewriter ribbons and clinical thermometers are requisitioned from the medical supply depot, directly by the surgeon, as needed.

Care is taken that all troops are properly vaccinated against smallpox, typhoid fever, and paratyphoid fevers, and that adequate material is on hand to fill requisitions for these protective processes.

In connection with requisitions, the great saving in time gained by making extensive use of rubber stamps may be remarked.

The office copy of all reports of survey are closely examined by the property division.

RECORDS

The decimal system of records is so nearly self-indexing that its advantage over the system provided by G.O. 92 is apparent. Nevertheless, considerable experience is necessary in the actual working of the system, as with all other systems of records, in order to dispose properly of papers so as to find them when wanted.

The steel standard filing cases are especially convenient and the folders are used to enclose all blank forms used in the office instead of the space formerly occupied by shelves. Instead of the daily consolidation of indices all papers on one subject are now filed in one place, the purport of each being kept up to date on Q.M.C. Form No. 490.

Supplementing the records, it is found convenient to keep a separate file of carbons of all telegrams sent, another carbon copy file of the numbered series sent to the Surgeon General; a third file of the carbon copy of all telegrams sent to the Adjutant General.

In connection with the record division is the mailing desk. The date of mailing of every paper is kept. Where possible the receipts of messengers are taken. Registry receipts are pasted in the book.

The record in the mailing book settles many controversies over lost papers locally, and answers queries from other points. It is an indispensable part of the office.

The following is a synoptive suggestion of the most important points concerning military correspondence.

Document file (numerical order) and
Decimal filing system.
Correspondence book (instructions for use on inside of front cover).
Letters and indorsements.
Clerk to initial entries.
Red card, attached to any document to be rushed.
How to fold letters.
Sending office number in upper left-hand corner. Single space for lines, double space for paragraphs.
Signature.
Omit conventional forms.
Use only one side of paper.
Stamps and other office marks on back of lower fold, first sheet.
Inclosures—number them and state how many.
Indorsements; to be numbered; simple in form; paragraphed; initialed if only routine in character.

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Three copies of each letter and indorsement are made if typewritten—original and two copies; one copy retained; others forwarded.

Channel of communication (military and staff). Former is addressed to the C.O. unless it goes to war department, in which case address The Adjutant General of the Army.

Correspondence book; enter therein a brief of each item, and a note of action taken (ink or indelible pencil). Number items continuously. Index each item promptly.

Document file; contains all original letters, indorsements, telegrams, etc., received or sent. It does not include regular reports and blank forms, as payrolls, sanitary reports, etc. These constitute separate files.

No record is kept in any office respecting matter of which a record is kept in any other office at the same headquarters, but information will be obtained by other offices, as occasion requires, from the office having the record.

No record is made of communications that are of no permanent value and that are finally disposed of by the answers thereto or without answer.

ORDERS

Orders, memoranda and circulars are issued disseminating orders or information from higher authority, issuing apposite instructions, giving information concerning the status, pay and equipment of enlisted men, specifying changes to be adopted in official methods, *e.g.*, rendering of reports and returns, or in formulating requisitions, correcting common errors, prescribing courses of instruction, designating purpose and membership of boards, etc.

The following are certain illustrative memoranda and orders covering the most important subjects, published in the Southern Department:

1. Pursuant to instructions from the Surgeon General, U.S. Army, May 14, 1917, the following schedule of instruction is prescribed for all officers of the Medical Corps below the grade of major, and all officers of the Medical Officers' Reserve Corps on duty at posts, camps, base hospitals and camp hospitals in this department.

2. At posts where base or camp hospitals are located, the medical officers on duty at the post will attend the course at the hospital.

3. The senior medical officer present will be in charge of the instruction and will detail such of his juniors as are proficient in the various subjects as instructors.

4. Where but one or two officers are on duty at a post, they must procure their instruction by study of the text-books recommended, adhering to the schedule as closely as possible.

5. As far as possible, the routine duties of medical officers will be arranged for the morning hours, leaving the afternoon free for instruction. Hours will be fixed for the sessions of the class and a copy of the schedule will be filed with the post commander.

6. Officers of the Dental Corps and Veterinary Corps will attend the course especially indicated for them.

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7. The course of instruction will be divided into three periods of four weeks each.

The object of the instruction during the first period is to familiarize junior officers with:

(*a*) The duties of the enlisted men of the Medical Department.

(*b*) Special duties of noncommissioned officers of the Medical Department.

(*c*) Elementary duties of officers of the Medical Department.

A minimum of four (4) hours daily will be devoted to instruction, excepting Saturday afternoon and Sunday.

FIRST PERIOD—BEGINNING JUNE 1ST

Date	Subject	Hours
Daily during the course	Drill	2

(Fifteen minutes will be devoted to setting-up exercises daily.)

One hour weekly will be devoted to drill in pitching shelter and pyramidal tents.

All drills are to be conducted by medical officers. When a number of junior officers are present they may be formed into a detachment for drill, using the equipment prescribed for the enlisted men of the Medical Department.

When practicable, at least one hour daily will be devoted to equitation by all medical officers.

Date	Subject	Hours
Each Saturday A.M.	Inspection	3

(The senior officers will give practical instruction in inspection of the detachments, barracks and hospital and in sanitary inspection of the post. Twice monthly practical instruction in physical inspection of enlisted men.)

		Hours
Monday, June 4th	Equipment of sanitary soldier, field and surplus kits (Dental surgeons and veterinarians will attend). (Junior officers will actually assemble and pack the field and surplus kits prescribed for the enlisted men of the Medical Department and be instructed in the care of equipment, and will display for inspection their own officers' field equipment.)	2
Tuesday, 5th	First aid (using only equipment of sanitary soldier). (Dental surgeons and veterinarians will attend).	2
Wednesday, 6th	Regimental medical supplies (their nature and employment), preparation of requisitions and receipts pertaining to medical supplies (Dental surgeons and veterinarians will attend).	1
Thursday, 7th	Care of animals (feeding, grooming, saddling and harnessing) (Veterinarians will attend). (Junior officers will be practised in saddling and harnessing.)	2
Friday, 8th	Examination of recruits (demonstration and practice). Preparation of all papers pertaining to enlistment and identification.	1
Monday, 11th	Military hygiene and sanitation.....	2
Tuesday, 12th	Military hygiene and sanitation.....	2
Wednesday, 13th	Military hygiene and sanitation.....	2
Thursday, 14th	Military hygiene and sanitation..... (To be taught by lecture, quiz and recitation and preparation of routine and special sanitary reports.)	2

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Friday, 15th	A.R. Muster and pay	1
	Preparation muster and payrolls	1
Monday, 18th	A.R. Rations and cooking	1
	Preparation clothing requisitions, ration returns and service records	1
Tuesday, 19th	A.R. Discharges, deaths, desertions	1
	Preparation of all papers pertaining thereto	1
Wednesday, 20th	Customs of service, Duties of medical officers (Dental surgeons and veterinarians will attend)	1
Thursday, 21st	M.M.D. Recruitment and instruction of personnel Medical Department	1
	Accountability for property funds (preparation of papers pertaining thereto)	1
Friday, 22d	S. & W. register and report (preparation of papers, cards and tags)	2
Monday, 25th	M.M.D. Organization, Medical Department, for war (dental surgeons and veterinarians)	1
	F.S.R. Sanitary service	1
Tuesday, 26th	F.S.R. Organization of military forces (dental surgeons and veterinarians)	1
	F.S.R. Transportation and supply	1
Wednesday, 27th	F.S.R. Marches and camping	1
	Map reading	1
Thursday, 28th	Map reading, use of compass	2
Friday, 29th	Map reading, orientation	2

8. In addition to the above hours of instruction, junior officers will, so far as practicable, prepare in person all the official papers pertaining to the Medical Department at their posts until they become proficient therein.

9. Officers in command of military hospitals will furnish all facilities possible for instruction of medical officers in the administration of such hospitals, and in the training of enlisted men as nurses and surgical assistants.

10. The training of enlisted personnel of the Medical Department will likewise be divided into three (3) periods of four (4) weeks each.

Eight (8) hours instruction per day, except Saturday and Sunday, and four (4) hours instruction on Saturday will be required.

Time consumed by the men in performance of their regular duties will be given credit.

During the first period instruction will be given in: Duties of the soldier, discipline, drill, equitation and care of animals; field work pertaining to the regimental detachment; first aid, anatomy and physiology.

11. The following official books will be used: A.R.; F.S.R.; M.M.D.; Tables of Organization; Drill Regulations for Sanitary Troops; Manual of Courts-Martial; also, "Handbook for Hospital Corps," Mason; "Map Reading," Sherill; "Medical Service in Campaign," Straub; "Principles of Sanitary Tactics," Munson; "Military Hygiene," Havard or Ashburn; "Gunshot Injuries," La Garde.

SECOND PERIOD—BEGINNING JULY 1ST

Date	Subject	Hours
Daily during course	Drill	1

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(Fifteen minutes will be devoted to setting-up exercises daily. One hour weekly will be devoted to drill in pitching hospital tentage. When practicable, at least one hour daily will be devoted to equitation by all medical officers.

Date	Subject	Hours
Each Saturday	Inspection (as in first period)	3
Monday, 2d	Regimental detachment (uses, administration and equipment)	2
Tuesday, 3d	Regimental detachment (uses, administration and equipment)	2
Thursday, 5th	The ambulance company (uses, administration and equipment	2
Friday, 6th	The ambulance company (uses, administration and equipment)	2
Monday 9th	The ambulance company (uses, administration and equipment)	1
	Map problems (covering use of ambulance company)	1
Tuesday, 10th	Field hospital (uses, administration and equipment)	1
	Map problems (covering use of field hospital company)	1
Wednesday, 11th	The field hospital (uses, administration and equipment)	1
	Map problems (covering use of field hospital company)	1
Thursday, 12th	The field hospital (uses, administration and equipment	1
	Map problems (covering use of field hospital company	1
Friday, 13th	Medical Department in campaign	2
Monday, 16th	Medical Department in campaign	2
Tuesday, 17th	Medical Department in campaign	1
	Map problems	1
Wednesday, 18th	Principles of sanitary tactics	2
Thursday, 19th	Principles of sanitary tactics	2
Friday, 20th	Principles of sanitary tactics	1
	Map problems	1
Monday, 23d	Military hygiene and sanitation	2
Tuesday, 24th	Military hygiene and sanitation	2
Wednesday, 25th	Military hygiene and sanitation	2
Thursday, 26th	Elementary position and road sketching	3
Friday, 27th	Elementary position and road sketching	3
Monday, 30th	Map problems	2
Tuesday, 31st	Map problems	2

During this period it is hoped that post commanders will be able to arrange lectures to the medical officers by line officers on the tactical use of line troops, signal corps, engineer corps and quartermaster supply work, and war games based on the reinforced brigade in which medical officers will take part as representatives of the sanitary service.

The senior medical officer at each station will take up this matter with the commanding officer and request his assistance in the work.

In addition to the studies outlined above, the clerical work of the organization done by the junior medical officers in person and the study of Army Regulations and Manual Medical Department, incident thereto, will be continued and credit given thereto.

Second period, for enlisted personnel; same hours as in the first period. Instruction in drill, equitation and care of animals, and first aid will be continued. Instruction will be given in elementary hygiene, work of ambulance companies and nursing.

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THIRD PERIOD—BEGINNING AUGUST 1ST

Date	Subject	Hours
Daily	Drill (as in second period)	1
Each Saturday	Inspection (as in first period)	3
Wednesday, 1st	Handling of rations and mess management	3
Thursday, 2d	Manual of Courts-Martial	3
Friday, 3d	Manual of Courts-Martial	3
Monday, 6th	Articles of War	3
Tuesday, 7th	Geneva and Hague Conventions. Rules of land warfare.	3
Wednesday, 8th	Military surgery	3
Thursday, 9th	Military surgery	3
Friday, 10th	Military surgery	3
Monday, 13th	Poison gases, liquid fire, shell shock, malingering, war psychoses and neurosis	3
Tuesday, 14th	Trench warfare (the trench systems, bomb-proofs, dugouts, entanglements, abattis)	3
Wednesday, 15th	Cantonment hospitals; their organization and management. Camps for casuals, convalescents and prisoners of war. Contagious disease hospitals	3
Thursday, 16th	Sanitary service; line of communication (hospital ships, ships for patients, hospital trains, trains for patients)	3
Friday, 17th	Base hospitals; their organization and management	3
Monday, 20th	The American Red Cross; its organization, functions and limitations	3
Tuesday, 21st	Civil sanitary function of the Medical Department in occupied territory	3
Wednesday, 22d to Friday, 31st	War games, tactical walks and rides; to be arranged by the senior medical officer with the assistance of line officers of the post.	

THIRD PERIOD FOR ENLISTED PERSONNEL

Instruction will be continued in drill, first aid, and nursing.

Instruction will be given in materia medica, pharmacy and cooking.

Men considered desirable for promotion will be given practical instruction in clerical work, pharmacy and ward management.

The following telegram from the Adjutant General of the Army, May 11, 1917, was repeated for information and compliance of subordinate medical officers, "Number 6793. Desired that you issue instructions to all concerned to have recruit travelling kits which are furnished recruits at recruit depots returned to recruit depots as promptly as practicable after recruits shall have joined organizations to which assigned and have been provided with regular equipments."

The following method for checking reports of sick and wounded was published for the information of medical officers:

1. Check spaces 1 to 10 inclusive on Form 52 and compare with nominal check list. See that all spaces are filled in. Check space 9 for Federal service only. Nominal check list must be signed.

2. Check spaces 11, 17 and 26, Form 52, for days lost. See that the space for the year is filled in, in space 26.

3. Check spaces 18, 19, 20 and 21, Form 52. See that notation in space 20 corresponds with the facts and that the card is initialed.

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4. Check spaces 12 to 16, inclusive. Deaths and discharges on S.C.D. should be recorded with particular care.

5. Form 51, strength report, should cover only the organization for which report is rendered, and should not include organizations otherwise reported upon.

6. "Carded" cases should be tabulated above the line under completed cases.

1. The following instructions were furnished for the information and guidance of all concerned:

The Medical Supply Depot at 50 San Francisco St., El Paso, Texas, has authority to issue field medical supplies for the Punitive Expedition, without reference to this office.

The following was published for the information and guidance of all concerned:

TYPHOID FEVER AND PARATYPHOID FEVER

1. In all cases of actual or suspected typhoid or paratyphoid fever, special report of the case will be made to this office, and a request for containers for specimens of blood and feces be made to the nearest department laboratory.

2. The Surgeon General's office requires that a special report on a specified blank form be forwarded in each case where positive diagnosis of typhoid or paratyphoid fever is made.

The following orders were sent to all surgeons of units:

1. You are directed to determine at the earliest practicable time if every *officer* and enlisted man of your organization has received the complete course (three inoculations) of typhoid prophylaxis. This determination should be based on the record evidence in each case, and every care should be taken to insure accuracy. Prompt report of results will be made to this office.

2. Similar action will be taken to determine if vaccination against smallpox has been carried out in all cases.

3. If any individuals are found who have not received typhoid inoculation and smallpox vaccination, their immunization will be undertaken at once and on completion, report will be made to this office.

4. The results of both typhoid inoculation and smallpox vaccination in the case of all enlisted men, with dates of same, should be entered by company or detachment commanders on each soldier's service record.

5. Special care should be taken by you to insure that all new men joining your organization are promptly immunized.

6. These steps are necessary to insure that no individuals, either through intent or otherwise, evade these essential prophylactic measures.

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1. Make special requisition at once for the brassards necessary to equip the authorized war strength sanitary personnel of your command,

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including chaplains and drivers of transports attached to the medical service for the entire campaign. Bandsmen will not be included at present. The requisition should be for brassards only.

2. Immediately on receipt of the numbered brassards turn in to the nearest permanent supply depot, any unnumbered brassards in your possession.

3. Prepare at once a register book, entering therein the symbol of all brassards in your possession. In the case of each brassard issued to an individual, there will be entered opposite the symbol number of the brassard the date of issue and the name, rank and organization of the person to whom it has been issued. The number of his brassard will be noted on the service record of each enlisted man to whom one is issued.

"In view of appearance of measles at some of camps organized militia, instruct all concerned your command as follows: In the event of measles appearing in a command all cases of the disease will be immediately isolated, all 'contacts' will be inspected daily, and when the disease shows a tendency to spread a separate 'Detention Camp' will be established where all incoming recruits will be held under observation for a period of twelve days before being permitted to join their organizations."

The following information was published regarding requisitions for sanitary equipment, Pars. 864, 865, 866, 867, 869 and 870, M.M.D., 1916.

"1. It has been decided not to provide organizations with a *complete* combat equipment (Pars. 866 and 867) and also a *complete* camp (regimental) infirmary, Pars. 869 and 870. Many articles that are common for combat equipment, will be taken from the camp infirmary. The articles common to both combat equipment and camp infirmary are:

Bag, water, sterilizing	Surgical dressings (Par. 955)
Bucket, g.i.	Fly, wall tent, small with copes
Candles, lantern	Tent pins, small
Chest, medical and surgical (Par. 932)	Horse equipments
Desk, field, No. 2	Lime, hypochlorite

"2. When the infirmary with an organization has a serviceable chest, D.S. requisition should *not* be made for a chest, medical and surgical. Requisitions should be submitted at once for the articles necessary to convert chest detached service into chest medical and surgical as directed in Circular 37, this office.

"3. Field desk No. 2 will not be issued when an organization has on hand a serviceable field desk of the old pattern."

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1. After muster-in of militia, *separate* reports of sick and wounded were required to be made.

2. G.O. 23, W.D., 1912, requires communications to be submitted in duplicate. This was interpreted to include personal reports, changes of

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status, monthly reports of motor ambulances and returns of the Medical Department.

3. In the case of the sanitary report, the carbon copy should be mailed to the department surgeon's office direct.

The following memorandum of subjects for inspections by a department surgeon or department sanitary inspector were formulated by Colonel John Van R. Hoff, when Chief Surgeon of the Philippines and used in that Department and the Eastern Department.

Numbers may be used for successive subjects and in noting conditions reference may be made to these.

MEMORANDUM OF SUBJECTS FOR INSPECTION

Location of hospital.
Date of inspection.
Command, designation and average strength.
When last inspected by a department surgeon.

Hospital—Temporary or Permanent

Materials.
Recent repairs. Present condition of repair of.
Administration building.
Wards.
Kitchen.
Other departments.
Any part occupied as quarters except as authorized by regulations?
Verandas.
Windows and doors screened.
Double sash and storm doors.

Condition, Police, etc., of Interior of Hospital

Halls.
Surgeon's office.
Assistant surgeon's office.
Record office.
Dispensary.
Poison locker in dispensary.
Liquor locker in dispensary.
Waiting room.
Dark room.
Photo room.
Bacteriological laboratory, condition and use of.
Electric laboratory.
Operating room and dressing room.
Dining rooms.
Kitchen.
Pantries.
General wards.
Isolation ward.
Prison ward.
Officer's ward.
Woman's ward.
Bed capacity.
Air space.

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Floor space.
Number of beds occupied at date of inspection.
Lavatories.
Latrines.
Baths.
Wardmaster's room.
Room for patient's effects.
Store rooms, number, location, use.
Liquor closet.
Sanitary troops, squad rooms for.
N.c.o. rooms, Sanitary-troops.
Recreation rooms, Sanitary-troops.
Lavatories, Sanitary-troops.
Latrines, Sanitary-troops.
Baths, Sanitary-troops.
Is a separate mess run for Sanitary-troops?
Heating of hospital, character and condition of apparatus.
Lighting.
Ventilation.
Basement of hospital.
Morgue.
Stables.
Ambulance house.
Carpenter shop.
Separate buildings for oil, paints, etc.
Means of controlling fire.
Fire drill.
Are grounds and outbuildings properly policed?
Are grounds beautified?
Walks and roads in good order?

Quarters for Master Hospital Sergeants, Hospital Sergeants, and Sergeants First Class

Number.
Materials.
Recent repairs.
Present condition.
Lavatories.
Latrines.
Baths.

Quarters for Women Nurses

Adequacy.
Suitability.

Hospital Administration

Regulations. Changes to date noted?
M.M.D. Changes to date noted?
Files of General Orders and circulars complete? Bound?
File of circulars, Medical Department, and other official publications complete.
Special regulations for government of hospital.
Special regulations for government of sanitary troops.
Roll calls.
Is presence of personnel and patients verified? How?
Arrangements to meet emergencies.
Is hospital inspected by surgeon?

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Are formal weekly inspections made?
By whom are prescriptions compounded?
Prescription files condition. Is metric system used?
Separate files for civilians.
Separate files for alcohol and liquors.
Record of sales of medicines and dressings to civilians. Are such duly reported?
Are medicines issued on prescription only?
Hospital fund statement.
Durable property return.
Proceedings of hospital council.
Verifications of cash balance.
Form 74.
Accounts paid by whom?
Dividends from post exchange.
Funds from subsistence of officers.
Funds from civilians.
Receipts from other sources.
Adequacy of subsistence allowance for patients.
Hospital garden.
Food, variety and quality.
Cooking satisfactory.
Evidences of thrift in kitchen.
Disposal of kitchen waste.
Method of obtaining ice and other supplies.
Bill of fare prepared in advance, and observed.
Meals inspected.
Any mess in hospital, other than for sick and personnel.
Any fund, other than hospital fund.
Disinfectants used.
Laundry. Done by contract or otherwise. If by personal services, are such actually rendered by creditor named in vouchers? Quality of laundry.

Care of Sick

Case records, by whom kept?
How often, daily, does the surgeon visit his wards?
Ward management.
Professional treatment.
Cleanliness of ward floors, ceilings, windows, paint, etc.
Cleanliness of person and clothing.
Hospital clothing always used by patients.
Cleanliness of bedding and beds.
How often is bedding changed?
How often is patient's clothing changed?
Are wards regularly cleared for cleaning and disinfection?
Is nursing properly done?
Who administers medicine?
Are stock medicines kept in the wards?
Is there a medicine locker in each ward? Are thermometers and appliances properly cared for?
What disposition is made of patients effects? Accounts of same?
What means of diversion for convalescents?
Are many cases transferred to or from other hospitals for treatment?
Are names of sick from other commands sent to proper officers?
Special diets, by whom prescribed, prepared and inspected.
Are infected cases properly handled?

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Are there standing orders covering such cases? Where and how are bed pans and urinals kept?
Number sick in hospital at time of inspection.
Special cases worthy of note.
How is sick call conducted?
Are company sick books properly kept?
Number sick in quarters.
Are sick in quarters actually confined to quarters and do such report to the surgeon daily?
Average daily non-efficiency from sickness.
Proportion in line of duty.
Proportion not in line of duty.
Epidemics.
Causes of disease within post.
Causes of disease in neighborhood.
Species of mosquitoes found at post. Are specimens of such forwarded to the Surgeon General?
What diseases contracted off reservation?
Are venereal inspections made, and how often?
Are they productive of good results?
Is there any civil control of prostitution?

Records

Morning report of sick and wounded.
Morning report of S.T.
S.T. det. sick book.
Retained report sheets of sick and wounded.
Register cards, sick and wounded.
Numerical check list, sick and wounded.
Card index of S. and W. for previous case number.
Returns, S.T.
Record of Instruction, S.T.
Reports of physical examination of recruits.
Returns of medical property.
Syphilitic register, Form 78.
Report of epidemics promptly rendered.
Correspondence books.
Document file.
Prophylactic register, Form 77.
Medical history of post, data required entered.
Estimates for repairs, etc.
Reports of death.
Retained muster and payrolls.
Retained clothing requisitions.
Retained copies of medical requisitions.
Retained and current service records and military records.
Settlement of clothing accounts.
Identification apparatus.
Malarial register.
Typhoid, paratyphoid and vaccination registers.
List of venereal patients doing duty.

Medical Property

Inventory of, when last made?
Requisitions for.
Any on hand not shown on papers?

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Condition in which received.
Quantity.
Quality.
Care of.
Any used outside hospital?
Medicines exchanged with druggists, or issued for cleaning mixtures, etc.
Liquor and issue book kept.
Blankets, care of.
Linen, care of.
Rubber goods and flexible catheters, care of.
Surgical instruments, care of.
Inspection of instruments, as required by M.M.D.
Property for condemnation. Are A.R. observed?
Who is responsible for property outside storerooms?

Field Equipment Medical Department

Chests. Frequently inspected. Used at post. Ready for field.
Field furniture. Used at post.
Litters, number and condition.
Wheeled litters.
Motor ambulances.

Field Equipment Quartermaster Department

Tentage, amount and condition.
Ambulances, pattern, condition.
Ambulances housed near hospital.
Ambulances used for other than hospital purposes
Ambulances, harness and animals.
Constantly available on demand.
Escort wagons.

Field Equipment Ordnance Department

Saddlery, etc.

Medical Officers

Names.
Efficiency and zeal.
Special qualifications.
Other duties, as surveying or recruiting officers, etc.
Instruction in general regulations, Manual M.D. and able to instruct their men therein
Health. Drill Regulations Sanitary Troops.

Contract Surgeons

Names.
Efficiency, zeal and health.
Special qualifications.
Other duties performed.

Dental Surgeons

Names.
Efficiency and zeal.
Health.
Other duties performed.
Hours of work.
Observance of Regulations.

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Dental supplies, adequacy; any furnished from post supplies.
Disposition of unserviceable dental property.
Reports, by dental surgeons.
Dental assistants well instructed.

Sanitary Troops

Strength conforms to requirements.
Master hospital sergeants.
Hospital sergeants.
Sergeants, first class.
Names.
Zeal and efficiency.
Special qualifications.
Length of service.
Health.

Sergeants

Names. Zeal and efficiency.
Special qualifications.
Length of service.
Health.
Number promoted during year.
When were Articles of War last read to every member of detachment?
Enlistments and reënlistments.
Health of men of detachment.
Are qualifications of applicants transferred from line carefully investigated?
Number transferred during year.
Instructions, by whom given.
Is schedule of instruction strictly complied with?
How many in detachment are qualified?
Discipline.
Is the detachment formally inspected by the surgeon every Saturday? The inspector will formally inspect the detachment as prescribed in D.R. and note absentees.
Are venereal inspections S.T. held?
Does C.O. inspect ambulances, litters, etc., as required by A.R.?
The inspector will interrogate the men as to their professional knowledge, and will examine them practically in first aid, etc.
Drill.
Equipment, is the same complete?
Clothing.
Soldierly appearance.
Instruction in equitation.
Care of animals.
Care of horse equipment.
Are ambulance drivers designated?
Promotion of privates to privates, first class, number made during year and how determined?
Promotion to grade of n.c.o.

Interior Economy of Detachment, A.R.

Are duties rotated and a roster kept?
Is hospital bedding used by S.T.?
What amusements provided?
Give the names and special qualifications of particularly desirable men.

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Women Nurses

Names.
Efficiency.
Special qualifications.
Health.
Hospital matrons.

Sanitary Condition of Post and Command

Are sanitary inspections made as required by A.R.? When?
Have recommendations regarding sanitary matters been approved and carried out?
Barracks.
Number.
Material of.
Condition as to police.
Occupancy.
Air and floor space.
Lockers and clothing.
Store rooms.
Kitchens.
Screened from mosquitoes and flies.
Use of bed mosquito bars.
Lavatories.
Latrines.
Grounds and gardens.
Water supply, source, quality and quantity.
Water boiled?
Drainage and sewerage.
Disposal of refuse.
Bathing facilities.
Food.
Bread.
Meat and vegetables.
Ice, from whence received?
Refrigerators.
Kitchen pantries.
Cooking.

Guard House

Occupancy.
Air space.
Ventilation.
Lavatories and baths.
Latrines.
Police.

Officers' Quarters

Store Houses

Bakery

Laundry

Corral

Post Exchange

Ice Plant

Distilling Plant

Condition of grounds and vicinity of post, as to stagnant water and vegetation.
Condition of dump.

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Sanitary condition of neighboring civil communities, and civilian attachés.
Is the physical examination of recruits conducted as prescribed in regulations and orders?
Is the prescribed identification record made at time of enlistment?
Are all recruits examined for vaccination immediately on reaching post and company commanders notified of result?
Are company officers instructed in first aid?
Do civilian physicians practice in the command, and are they duly registered?
Is any practice done by Army surgeons among civilians in neighboring communities? What is the daily average number of such cases seen?
The inspectorshould give the personnel opportunity to communicate with him privately.

This report of inspections covers only defects, deficiencies, irregularities, recommendations, commendations and such other matters as may be specifically required. The report with the statement of the commanding officer is forwarded to the Adjutant General of the Department with a copy for the Surgeon General, U.S.A., and a duplicate submitted to the department commander, to be filed in the department surgeon's office.

Sanitary inspections of Medical Department organizations are reported on Form 50B.

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CHAPTER XVI

PUBLIC HEALTH SERVICE

Not infrequently in time of peace, medical officers are required to discharge duties that are essentially such as pertain rather to civil than to military administration. Illustrations of such service were those of General Torney at the time of the San Francisco earthquake, those of General Gorgas and his staff in the Panama Canal Zone, of Colonel Kean in Cuba, of Majors Hoff and Ashford in Porto Rico and of Colonel Birmingham at Vera Cruz. Civil sanitary services were also rendered by medical officers at the great fairs held at Buffalo, St. Louis and Seattle, after the forest fires in the Northwest in 1911, the floods in the Ohio and Mississippi Valley, etc.

In devastated communities, the prime desiderata are the establishment and maintenance of good sanitary conditions in encampments of refugees. Camp sites of refugees from cities should be selected as far as practicable with a view to making connection with the cities' sewerage system. They should be provided with toilet facilities. Water-tight and fly-tight receptacles for excreta should be provided or latrines dug. Disinfectants, preferably phenol 5 per cent. or chloride of lime 15 per cent. in water, should be employed liberally. Kitchen or other refuse should be removed and burned.

A safe and adequate water supply should be provided. For a city of 5000 to 20,000 inhabitants three ordinary 50-gallon barrels and some piping may be installed, one barrel to be used as a mixing tank and the others as distributing tanks. The hypochlorite treatment should not be employed to purify a highly turbid water until this has been purified by sedimentation, coagulation, etc. This last way may be effected by adding 5 grains of alum to the gallon of water. Hypochlorite treatment of a cistern containing 5000 gallons of water, after clarification, may be effected by actively stirring 1 ounce of good chloride of lime in 2 gallons of water, letting the solution stand for five minutes and then pouring into the cistern.

Safeguards must be adopted to prevent dangerous dissemination of human excreta, to treat all insanitary privies and cesspools with disinfectants, the rigid enforcement of ordinances requiring a prompt report of communicable diseases, a systematic search for the sick, removal and proper disposal of débris and concerted action for the cleaning, drying and ventilation of flooded houses.

As a rule, however, the civil sanitary functions of medical officers are those discharged either in time of war in the territory under military control and those performed for special reasons in time of peace. Illustrations of

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the former were afforded at the time of hostile occupation of Cuba, the Philippines, Porto Rico, Guam and later Vera Cruz.

The Medical Department is charged with the initiation of all hygienic measures to insure the good health of the troops and the management of epidemics among the inhabitants of the country under military control and to prevent infection of new territory or of the Army. Munson, whose paper on this subject is quoted in part below, emphasizes that in order that they may discharge these duties effectively, Army medical officers must have direct supervision of the public health organizations in the territory concerned and must be vested with adequate authority and the means whereby to carry out these projects.

If martial law has been declared, the general sanitary situation is less complicated for the institution and the execution of sanitary measures devolves automatically upon the Medical Department, but if no such declaration has been effected the situation is less clear. Early action to prevent epidemics is vastly more valuable than the same amount of action later, to effect their control. Though martial law be not established the dominating power should secure its protection by effecting at least the coöperation of its own sanitary service with that of the occupied territory, and if necessary, the control of the latter by the former.

The primary essentials are (1) a determination of the general situation, as it exists; (2) the creation of an effective sanitary service organization; (3) the devisement of proper remedial and precautionary measures, which should be instituted.

Preliminary study in order to meet these requirements may give much theoretical knowledge, but there are few who have had the broad practical experience which would fully qualify them for the discharge of these peculiar duties. The sanitary officer, under a military jurisdiction, must be thoroughly conversant with military methods and affairs, have a general knowledge of the sanitary regulations, plans of organization, and methods of procedure of representative State and municipal civil sanitary organizations, and be capable of adapting this latter branch of knowledge to the former, and to local conditions.

Among factors to be considered when determining the sanitary methods to be followed are the character of prevailing diseases, the race to which the residents belong, their existing standards in sanitation, their language, habits, sentiments (especially those toward the forces in occupancy), their predelictions, predjudices, and the character and efficiency of their preëxisting sanitary organizations. If the sanitary standard of the race has been high, it will more readily coöperate intelligently with the medical administration than if it has been low, if it be not counterbalanced by hostility or passive opposition.

Other matters requiring consideration are the climate, altitude, topography, and geology of the territory, the facilities of communication and the degree to which occupants of the territory have been disturbed by warfare.

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After hostilities there generally exists a noteworthy depreciation in the effectiveness of the local sanitary organizations and this depreciation is correlative with the degree to which the inhabitants have been incommoded. When a community is occupied by invading troops, the whole machinery of self-government, including that for the preservation of the public health will usually be found greatly impaired or entirely destroyed. Complete reorganization is necessary. Such a condition has presented itself to the United States in both the East and West Indies. Residents who have been exposed to the hardships of a prolonged siege or to protracted military operations, captured troops who are often overworked and underfed, and other prisoners of war are often more or less dispirited. They are careless of their welfare and require more careful surveillance than do those who have not been exposed to such depressing influences. To the disorganization of the sanitary service is superadded this depreciation in the morale of those who have endured mental or physical suffering. Prisoners of war especially tend to become uncleanly and disorderly. To prevent this they should be organized by the sanitary officer into suitable groups for administrative and sanitary purposes, under their own officers, and the latter charged with the enforcement of orders. They should be sent to the rear as soon as possible, but pending such removal, should be segregated with proper sanitary supervision.

Should there be an epidemic in a surrendered city, the invading troops should not be allowed to enter it, or, if they have done so, they should be removed promptly.

The control of the noncombatants in a given district is a delicate and difficult task. To a degree their coöperation must be secured, and for moral effect, this should be done by persuasion and not by force. Such noncombatants are often destitute, many of them are ignorant and helpless, and there are among their numbers many women and children. They congregate where they are safest, construct such primitive structures as they can, and often take refuge in underground habitations. The environment and mode of life, of such refugees, and their pitiable mental distress renders them indifferent to sanitary precautions. After a besieged city is captured the existing congestion should be relieved as promptly as possible and insanitary camps abolished. The only exception to this rule is found where a dangerous communicable disease may be prevailing. In this case the infected area and its occupants are quarantined by a military guard. Inhabitants of healthy refugee camps should be obliged to at once return to their homes. The sick among all refugees should be isolated promptly, however, and those who have been in contact with them should be removed to more favorable surroundings and held under observation during the necessary incubation period. If for any reason some are unable to return to their homes they should be given the best shelter available. Factories, warehouses, churches, and other public buildings may be utilized. Camps may be organized in which the refugees are placed in rough pavilions which they construct for themselves on approved sites or in which

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tentage is employed. Such camps should be under military supervision. Their sanitary condition must be kept under constant surveillance. They should be evacuated as soon as possible. All public institutions such as jails, asylums, etc. should be inspected at once, and any necessary measures taken for their efficient operation and proper sanitary condition. Whatever ravages war may have inflicted upon the water service of a city should be repaired promptly.

If the food supply in a captured city is deficient, such food as is available should be seized at once and distributed, and supplies drawn from the commissary train. Rations may have to be issued until other supplies can be forwarded. The services of the Red Cross Society and other relief organizations should be requested, but gratuitious issues, tending to pauperize people, able but unwilling to work, should be avoided as far as possible.

General police work, prompt removal of refuse, cremation of dead animals, opening up of sewers that may have become obstructed, and the publication and enforcement of a few simple sanitary orders are among the first steps for improvement taken by a newly created sanitary department.

In the course of almost all sieges, epidemics appear. To control these, house to house inspections should be made. At first these should be made under the provost guard, but later carried on by the sanitary department. There should be free medical and surgical clinics (which probably can be conducted best by local civilian physicians, employed for this purpose by the health office). A bureau of notification, a system of examinations, autopsies in doubtful cases, and sanitary disposal of the dead should be established.

Those suffering from dangerous infectious diseases should promptly be removed to a suitable hospital, and those exposed to such infection should be segregated. Hospitals established whether for infectious or other diseases should be as attractive as possible. The personnel of the force employed for the transportation of the sick and their care while in hospital may have to be supplied at first in whole or in part from the sanitary personnel of the Army until the civil organization can be effected. In time of epidemics public gatherings should be prohibited and places of public amusement closed.

If the establishment of a marine quarantine is desirable, the services of an officer of the public health service may be requisitioned.

Local quarantine of houses, hospitals, detention camps, etc., can be best effected by the provost guard.

"It is absolutely necessary in order to secure satisfactory results," says Munson, "that there shall exist at the outset, a thoroughly workable, simple, economical and effective sanitary organization based upon the special necessities of the case. Without such organization, sanitary work drags slowly, available energy and material are misdirected and wasted, while that thorough attention to detail and readiness at all times for immediate action, which is the key to sanitary success, cannot be obtained."

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The medical officer detailed to take charge of the health matters of a civil community should be carefully selected by the commanding general, with a view to his special fitness to the work, including not only special technical knowledge of sanitary purposes and methods as applied to civil as well as military conditions, but also for a high capacity for organization and administration combined with good judgment, discretion, force of character and tact. Without these latter qualities, the most scientific and energetic sanitary effort will be nullified through the exciting of opposition, which will further increase the dislike which the conquered must inevitably feel for their conquerors. Since sanitary work of a general nature is necessarily largely personal in its application, the influence of unwise action is promptly felt and resented. The health officer should, therefore, keep close watch of the public attitude, and not enforce compliance with the minor and non-essential improvements more rapidly than their purpose can be reasonably understood and accustomed modes of life can be adjusted to the new conditions. Health requirements which are of a trivial nature will very likely be disregarded, and thus weaken obedience to more important provisions.

The medical officer detailed in charge of civil sanitary matters must be entirely freed from all military jurisdiction save that of the commanding officer of the captured city or occupied military district. Within his sphere of activity he should be charged with such responsibility for results and granted such latitude of initiative and action as ordinarily fall to health officers in civil life. He should not be subjected to interference by higher authority, beyond direction as to the general purposes and limitations of the sanitary procedure which he is supposed to follow. All matters of detail should be left to him. He should first seek a general, but clear, understanding of the existing local sanitary situation in all its phases, and a due appreciation of the matters which are of the most immediate importance to the public health. For this purpose he should make a rapid but general sanitary inspection, to be later supplemented by more detailed reports made by his subordinates.

Immediately upon the occupation of the town, a sanitary order should be issued by the Provost Marshal General, and actively brought to the attention of all concerned. This order should direct property holders to clean up without delay all premises occupied by them, and should designate the methods by which the refuse may be destroyed and the places to which it may be conveyed for disposal. Much refuse can usually be destroyed in kitchen fires. It should also direct that all cases of communicable disease be promptly reported to the health officer without delay by the responsible occupant of the premises in which such sickness may exist.

As soon as the public health organization has been put into operation, and the special needs of the sanitary situation have been estimated by the health officer, a second sanitary order should be issued by the Provost Marshal General, couched in simple, concise language, incapable of misconstruction. If necessary to reach persons speaking an alien tongue, it must be translated accurately. This second order should be as complete as

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possible in order to meet all important existing sanitary needs. When possible, it should be based on previous existing sanitary laws, either confirming them in their entirety or modified as required. During the period of military occupation, this order serves as the basic sanitary order under which the sanitary government is operated. All sanitary improvements ordered should be practicable as well as desirable. The irritation of an already hostile population, by nagging enforcement of relatively unimportant sanitary rules, results in a condition of the public mind which cannot be disregarded from either the political or military standpoint. Home life must be respected as far as consistent with the attainment of proper results.

The sanitary officer should utilize available military power as little as possible, reserving it for the more obstinate cases, but not hesitating to use it vigorously when absolutely necessary. Peremptory orders are essential in coping with sudden emergency, but in securing steady, progressive and permanent improvements in a fairly well-ordered and civilized community sanitary education is unquestionably more valuable.

Where sanitary orders are not voluntarily complied with in their essentials, they must be enforced. This is accomplished by reporting the dereliction to the officer in command of the provost guard, and of the police force, if one exists, who will cause the offender to be arrested and brought to trial before the appropriate court, either that of a Provost Marshal Judge, or the proper civil court, if the latter has been continued in operation. On the sanitary department devolves the responsibility of furnishing the necessary witnesses and evidence for the prosecution of such offenders.

The headquarters of the sanitary department should be established at a central point, be provided with telephone communication and adequate transportation. If a sanitary organization has previously existed, it should be taken over with its supplies as it stands, and its offices should not be moved, as their location is already familiar to the public.

To facilitate sanitary work, the sanitary officer must organize his office into suitable divisions under competent assistants. It is their duty to attend to the details and dispose of all routine business referred to their divisions. In a general way the following central organizations will ordinarily be required:

1. A clerical division, having to do with all current business, correspondence and personnel.

2. A property division, charged with the purchase, storage and supply of all material and equipment.

3. A financial division, responsible for the receipt and accounting of all moneys paid to the health department, and acting as a disbursing office for the payment of all bills, salaries and wages chargeable against it.

4. A statistical division, for the recording of all births, deaths, cases of infectious disease, etc. The data of this division are really the outward expression of sanitary results.

5. The sanitary engineering division, in charge of such matters as have a direct bearing upon health, and which relate to the location, sanitary con-

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struction and improvement of buildings, ventilation, plumbing and the draining of houses and premises, measures employed for the disposal of sewage and refuse, construction of public latrines, the prevention and abolition of nuisances, etc.

6. The medical division, responsible for all matters relating to sanitary inspections, diagnosis of disease, tracing of the course of epidemics, transportation and treatment of the sick, postmortem and laboratory work, management of hospitals and detention camps, disinfection work, special methods of prophylaxis, such as vaccination, supervision of district sanitary work and medical relief work, the purity of food and water supplies, etc. It may be necessary to still further subdivide the above duties, under responsible chiefs, where the amount of work falling to this division is very great. Per contra, several divisions may be administered by a single chief. Only the official in charge of the medical division should necessarily have had a medical training. It is desirable, however, that the chief of the statistical division should be a doctor. The chief of the sanitary engineering division should preferably be an officer of the army engineers, detailed to this duty. In order that all sanitary work be properly coördinated, it is essential that the office of the sanitary engineer be under the control of the chief sanitary officer. While suitable civilian physicians may be employed in the central health office, the important administrative positions should be filled by competent medical officers detailed from the occupying forces. Subordinate, nonprofessional personnel should be employed.

In the presence of an epidemic, a strong central sanitary field organization should be created, to constitute a reserve force which can be sent from time to time to the assistance of district sanitary organizations to meet existing emergencies or forestall threatened epidemics. This especially applies to inspection and disinfection. All cases of contagious and infectious disease should be reported. The information desired should comprise the name, age, sex, and occupation of the individual, the disease from which he is suffering and the possible source of infection. This information should be required in cases of:

Measles, rubella, scarlet fever, smallpox, varicella, typhus, relapsing fever, diphtheria, typhoid fever, Asiatic cholera, tuberculosis (of any organ), plague, tetanus, anthrax, glanders, epidemic cerebrospinal meningitis, leprosy, infectious diseases of the eye (trachoma, suppurative conjunctivitis), puerperal septicemia, erysipelas, whooping cough, dysentery, paratyphoid and yellow fevers.

House to house inspection should be made.

It is not practicable here to specify the various records required at sanitary headquarters, since these will vary according to circumstances. It is enough to say that everything which has or may have any bearing on future sanitary operations should be duly recorded. All records should be maintained on the loose leaf or card system. To reduce writing and facilitate compilation, all reports and returns should, so far as possible, be made

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on printed card forms. The methods and forms introduced by Doctor Doty in the Quarantine Station at Hoffman's Island, New York Harbor, are especially worthy of study in this connection.

As soon as time permits, and if the occupancy is to continue over a considerable period, a sanitary map of the city, showing each sanitary district with the blocks and buildings therein, should be prepared. Such a map will greatly facilitate the institution and execution of appropriate sanitary measures, especially in epidemics of infectious disease. Colored pins may be used on these maps to great advantage to show the location and character of each case of infectious disease.

Under settled conditions, a community of no great size, say 25,000 to 40,000 population, can be successfully administered by a single health organization combining the administrative and executive functions of the central and district health offices about to be described. But in communities of greater size than this, or in those whose general sanitation is poor, and where general standards of living are low, or in those suffering from or threatened with an epidemic of disease, a subdivision of the community into two or more sanitary districts, for the better direction of the sanitary effort may be advisable. In time of severe epidemics, these districts may be still further divided for more effective control.

The sanitarian-in-chief should have subordinates, whose duty it is to inspect and supervise certain definite regions or districts. These subordinate inspectors must have a due sense of their responsibilities and duties and also of the rights and needs of the inhabitants. They must be animated by a spirit of justice. If the rights and needs of the inhabitants are not respected, the inspectors will be regarded with hostility, will be misled, deceived and molested, and their usefulness impaired or destroyed.

The district medical inspector must have a sufficient personnel under him to accomplish promptly the work of inspection and improvement. This, in a general way, may include inspectors, laborers, carpenters, disinfectors, vaccinators, etc. Usually the number of district sanitary employees is high at first, but as sanitary conditions improve the working force is proportionately decreased. The work of sanitary inspection will be greatly lightened if the provost guard, and such police force as exists, are required to report to the nearest district sanitary inspector the existence of nuisances and any cases of infectious diseases, coming under their notice. In organizing district sanitary forces, it is advisable to secure the detail of capable enlisted men from the occupying forces to act as foremen and chief district sanitary inspectors.

Civilian inhabitants of the community should be hired as needed. They are familiar with local conditions, language and trend of thought, and can be made very useful in reducing to a minimum that friction which vigorous sanitary measures inevitably engenders. Once familiar with a district, they should not be transferred except for good cause. All complaints made against employees of the sanitary department must be investigated promptly. The unworthy and those to whom justifiable suspicion of dis-

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honesty attaches must be eliminated. Sanitary employees are constantly exposed to the temptation of bribery, which if accomplished, absolutely destroys popular confidence in the sanitary organization.

The district medical inspector is responsible for the discipline and efficiency of his subordinates, and receives and executes all orders received from sanitary headquarters. He sees that all records are maintained, reports rendered, and supplies secured and properly utilized. He gives his subordinates such technical instructions as will enable them to perform their duties intelligently and thoroughly.

He makes frequent detailed sanitary inspections of his district, and also personally investigates every case of nuisance reported to him as requiring abatement or punishment through legal proceedings.

The foreman of each district makes investigations of the sanitary condition of all premises, especially tenements, the disposal of refuse, the detection, reporting and abolition of nuisances, the serving of sanitary orders, the investigation of all cases of sickness and causes of death. Sanitary orders should be served on a printed card form, stating definitely what must be done and fixing the time limit for compliance; a brief synopsis of the order entered on the stub of the card retained by the inspector, and signed by the recipient of the order, is evidence that it has been served. He also supervises such special measures of prevention as disinfection, and is directly responsible to the district medical inspector for the discipline and efficiency of assistant inspectors and laborers.

The number of subordinates, assistant inspectors, laborers, etc., required in a district depends entirely upon the amount and character of work to be performed. As a general rule, not more than six or eight men should work together as a sanitary gang. If more labor is required, additional gangs, each under its foreman, should be organized.

In a captured community, it is quite probable that little or no public funds will be found available. Any public moneys which may be on hand may be taken over by the proper representative of the successful forces and applied to the maintenance of public institutions and administrative organizations and to the betterment of conditions. From any such funds the work of the emergency sanitation should be entitled to draw a large share. If no such public funds are available, and until customs duties can be put into operation or a suitable system of direct taxation can be enforced, it may be necessary, to meet existing emergencies, to draw from military sources the necessary financial support, leaving the question of repayment from the civil treasury subject to subsequent adjudication.

The necessary sanitary supplies and apparatus belonging to the community should be taken over and utilized, while such as are owned by private parties, whether stored in warehouses or in use, may be seized and paid for, either by cash or voucher. Many quite satisfactory sanitary agencies may often be improvised.

The issue of medical supplies may be authorized where necessary to prevent the spread of disease among the inhabitants of an occupied country.

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A large amount of labor for sanitary purposes will usually be necessary. This may be secured by the detail of soldiers from the occupying forces, by the forced labor of prisoners of war or noncombatants, or by the hiring of civilian laborers.

In general it is not desirable for the conquering troops to be utilized in this work of improvement, as they should be employed for military purposes only, as far as possible, and should be kept away, as a rule, from infected areas.

The services of noncombatants should be utilized, if required, on public works through voluntary or forced labor. Under the conditions usually following sieges rations may have to be supplied by the conquering force, so far as they can be spared and until such time as efficient communications can be resumed. As a general rule, individuals required to give forced labor on public works should be fed by the military authorities and not by civilian relief societies.

No two civil communities will be found alike in their sanitary requirements. A general scheme if elaborated in advance, must be both broad and elastic and capable of adaption and modification in its details to meet the requirements of local conditions. There are certain fundamental sanitary laws which may be applied anywhere but the special means of application and the extent to which they should be applied, varies with local needs.

The public health laws and the regulations of States and cities give much valuable information on the details of this subject.

The civil sanitary measures employed by the Japanese in Manchuria, as described by Follenfant, are of interest.

During the Chino-Japanese War of 1894–95, the Japanese Army imposed certain sanitary measures upon the inhabitants of the occupied territory. In the Manchurian War these measures were systematized and more vigorously enforced. The danger of contagion was greater because of the larger number of troops in the field. The regulations and proclamations drawn up were innumerable. For example, the following poster was issued by the Forth Army, under date of December 1, 1894. It is a fair illustration of an effective notice that can be distributed among an ignorant people.

"1. It is absolutely necessary to follow hygienic principles in order to enjoy a long life. If there are any amongst you who are sick, it is your duty to inform the troops at the nearest cantonment and they will be glad to give the care and medicines required.

"2. Cholera and dysentery are contagious diseases, but diseases of the lungs and eyes are none the less contagious, and run in families and even villages. In order to prevent the spread of these contagious diseases to neighbors, and thus to the entire village, the inhabitants should follow the rules of our army, with reference to measures of segregation, drainage and disinfection.

"3. A limit, within which all must be kept clean, will be fixed for each group of houses, street, and village. Night soil should be deposited in the

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fields, where it may be utilized as a fertilizer, provided it is not burned. It should never be left near habitations."

By order of the Director General of the Sanitary Service in the field, there was organized in the spring of 1905, a mixed board of health, composed of a number of Japanese officials, members of the Japanese Red Cross Society, local officials, and prominent civilians.

Immediately after the Japanese entered Mukden, the line of communication buried the dead and a board of health was organized. This board was formed under the direction of an official of the line of communication. A general cleaning up of the city was at once commenced and carried out by fifty Chinese carts and one hundred coolies per day. At the same time the following order was issued:

"1. Dirt which is already in the city must be collected and taken to a distance without the city walls.

"2. The sidewalks of all houses must be swept each morning.

"3. The dirt from each house must be collected each morning and carried without the city.

"4. Throwing night soil or dirty water in the streets is forbidden.

"5. The military authorities should be immediately informed of any cases of contagious disease in man or animal.

"6. The sale of diseased animals is forbidden."

(The installation of latrines was deferred to a subsequent date because all the carpenters were busy in the army.)

As the police work progressed too slowly, the officers and noncombatants of two of the garrison battalions were added to the Japanese Board of Health. They were advised to force the Chinese to obey an order once given, but, on the other hand, to order no impossibilities. This board of health had a meeting with the officials of the line of communication and formulated the following regulations, which went into effect the next day:

"1. Police of the city will be accomplished in three periods. In the first, the streets and houses will be cleaned; in the second, the dirt which has accumulated on the ground outside of the houses will be gathered up; and in the third, the sinks will be drained.

"2. There will be sixteen Chinese on the board of health.

"3. The city is divided into four sections and for each one of them four members of the board are responsible. They must see to it that policing progresses rapidly.

"4. Each day two hundred coolies and one hundred carts are assigned to policing the city."

In order to comply with these rules, the Chinese chief of police addressed the following circular to the inhabitants of the city:

"The Japanese military commission has detailed seven officers and a number of Japanese soldiers to aid us in policing the city. Furthermore, sixteen Chinese members of the board have been designated to assist in this work. The city has been divided into four quarters (East, West, South and North). Each will be policed by the aid of two hundred coolies and one

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hundred large carts. They should carry outside the walls the accumulated filth. Within five days the inhabitants must clean the interior of their houses and shops and remove any night soil which may be found there.

"This circular is to inform the populace of the urgency of the regulations adopted for the sanitation of the city. Within five days all these directions must be carried out faultlessly and leave no cause for criticism by the Japanese officers."

On March 23d, the Marshal and Governor each issued a proclamation which they had drawn up concerning the sanitation of the city.

On the 28th of the same month the two following orders were, upon the recommendation of sanitary authorities, issued by the chief of the central police.

1. Public latrines will be established as soon as possible.

2. The neighborhood of public wells must be cleaned up at once to prevent contamination of the water.

On March 28th after consulting the line of communication, the tanners were ordered to transfer their business outside the city, on sites far from all habitations. Their families, however, were permitted to remain in the city.

A spot about 200 meters from the cantonment, habitations and public roads was selected as a place to which all dirt should be taken. This place was indicated by a guide board and guarded by the police.

During the occupation of the country by the Japanese army, many thousands of the inhabitants of Mukden were punished for continuing their ancestral custom of urinating in the streets. For each offense they were fined about 5 yen.

The United States military government of Cuba provided for sanitary service coextensive with the Island and provided 10 per cent. of the revenues for public work and other objects calculated to promote sanitation and for sanitary service in the cities of the Island. Most Latin American peoples look to the government instead of making individual effort. Cuba at first provided for a central board of sanitation with headquarters at Havana and a local board in each municipality to be appointed by the municipal authorities. Expenses were to be paid by the municipalities and to be provided for by annual municipal budgets. But the revenues were not enough and eventually the National Government was called upon to supply the deficiency. Finally the municipal appointment of sanitary officials was found to be unsatisfactory inasmuch as they were too amenable to local influences, especially opposition, and the National Government was charged with all sanitation.

A new decree was then issued organizing the National Board of Sanitation charging it with securing all proper sanitation and giving it the necessary authority for accomplishing this end. Local sanitary boards were abolished and replaced by a Chief Sanitary Officer in each municipality, each chief being appointed by the municipal board. He was subject to it and removable by it. Municipalities in Cuba devoted 10 per cent. of their revenue to sanitation. Those in Porto Rico devoted 15 per cent. to this work. Penal-

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ties prescribed for the violation of sanitary rules and regulations could be imposed by the Chief Sanitary Officer of the municipality, but appeal could be made by the alleged offender to the courts.

Similarly, under Colonel Henry P. Birmingham, at the occupation of Vera Cruz in 1914, regulations were provided for the cleaning up of that city and to promote the public health.

In the present war in Europe similar methods have been employed in occupied territory. General regulations are laid down and house to house inspections made in the zone of the advance. Posters were rarely displayed but sanitary regulations were promulgated and enforced. Compulsory personal prophylaxis against cholera was effected among the population of infected districts in Galicia.

The sanitation of the Panama Canal Zone was effected by brief rules and regulations from which those given below were elaborated. Their especial worth lay in their simplicity, paucity and sufficiency.

The remarkable results in sanitation obtained under them were procured at a cost of less than 1 cent per diem per capita of the population affected. The medical and hospital care of those employed on the canal, and of their families cost 2⅜ cents per capita per diem. The figures are well within the financial ability of almost any tropical community and are therefore of especial interest to military surgeons performing civil sanitary duties therein.

The regulations under which this administration was effected while formulated for use in time of peace are singularly well adapted for the sanitary service of a civil population in time of war.

It should be emphasized, however, that the chief value of the sanitary ordinances governing the Canal Zone and the Cities of Panama and Colon adapted from them, did not lie merely in the points which they considered nor even in how they were considered, but largely in the vigor and intelligence with which they were enforced. The sanitary ordinances in Guayaquil were in many respects identical with those in the Canal Zone, but the standard of sanitation which there existed was so different, and the method of enforcement so inadequate, that, in that city, plague, yellow fever and other epidemic diseases prevailed for many years after they had been stamped out in the Zone.

The following regulations for Panama and Colon, issued at the instance of General Gorgas are, in all essential respects, identical with those governing the Canal Zone and are generally applicable to many communities. They were published in parallel columns in English and Spanish.

GENERAL REGULATIONS

ARTICLE I

SECTION 1.—The term "Health Officer" whenever used in these regulations shall be held to mean the official in charge of all sanitary work either in the City of Colon or City of Panama.

The "Health Officer" shall be appointed by the Chief Sanitary Officer in

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charge of the sanitary service of the Canal Zone and of the Cities of Colon and Panama.

SECTION 2.—The word "light" or "lighted" shall be held to refer to natural, external light.

All words or phrases used in these regulations shall be taken in their usual or natural meaning, unless special meaning is given to such words or phrases by these regulations.

SECTION 3.—The word "street" when used in these regulations shall be held to include avenues, public highways, sidewalks, street gutters and public alleys; and the words "public places" shall be held to include parks, piers, docks, and wharves and water and open spaces thereto adjacent, and also public yards, grounds, and areas, and all open spaces between buildings and streets, and in view of such streets; the word "rubbish" shall be held to include all the loose and decayed material and dirt-like substance that attends use or decay, or which accumulates from building, storing or cleaning; the word "garbage" shall be held to include swill and every accumulation of animal or vegetable matter, liquid or otherwise, that attends the preparation, decay, and dealing in, or storage of fish, meats, fowls, birds, and all vegetables or other articles of food or drink; and the word "dirt" shall be held to mean natural soil, earth, and stone.

SECTION 4.—The term "concrete floor" or "cement floor" when used in these regulations, shall mean a floor of concrete, 3½ inches thick, with a cement mortar finish of ½ inch thickness.

SECTION 5.—The word "physician" shall include every person who practices about the cure of the sick or injured, or who has charge of, or professionally prescribes for, any person sick, injured, or diseased.

SECTION 6.—The word "meat" whenever used herein, includes every part of any land animal and eggs (whether mixed or not with any other substances); and the word "fish" includes every part of any animal that lives in water or the flesh of which is not meat; and the word "vegetable" includes every article of human consumption as food, which (not being meat or fish or milk) is held, offered or intended for sale or consumption as food for human beings, and all fish, meat and vegetables found in the Cities of Colon and Panama, respectively, shall be deemed to be held for such sale or consumption as food, unless the contrary be distinctly proved.

SECTION 7.—The word "cattle" shall be held to include all animals except birds, fowl and fish, of which any part of the body is used as food; the word "butcher" shall be held to include whoever is engaged in the business of slaughtering any cattle or keeping or driving cattle for slaughter, or in selling any meat; the words "private market" shall include every store, stand and place (not being a part of a public market) at which the business is the buying, selling, or keeping for sale of meat, fish or vegetables, or other articles for human food.

SECTION 8.—The word "bakery" shall be construed to mean any place used for producing, mixing, compounding, or baking, for sale or use in any restaurant, bakeshop, hotel, or other place, any bread, cakes, pies, biscuits,

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crackers, rolls, macaroni, or other food products in which flour or meal is the principal ingredient.

SECTION 9.—Whatever is dangerous to human life or health; whatever building or part or cellar thereof is overcrowded or not provided with adequate means of ingress and egress or is not sufficiently ventilated, drained, lighted, or cleaned, and whatever renders soil, air, water, or food impure or unwholesome, are declared to be "nuisances" and illegal. Any nuisance must be promptly removed upon receipt of written notice from the Health Officer by the person responsible therefor.

Every person who creates or maintains, or who aids in creating or maintaining a nuisance, shall be subject to a fine of not less than 5 balboas nor more than 50 balboas (a balboa has the value of 50 cents, U. S. currency) for each and every day such nuisance shall remain unabated after written notice to remove the same, as herein prescribed, has been served upon the person or persons responsible therefor; and, in addition, the Health Officer may cause the nuisance to be abated at the expense of the delinquent, and the cost of the same shall be collected by execution against the property of such delinquent.

SECTION 10.—The Health Officer or his authorized representative may enter upon or within any premises at any time for the purpose of inspecting the same.

In the event that the property owner, tenant, or person in charge of a place or premise refuses to allow the Health Officer or his representative to visit same for the purpose of inspection, the Health Officer will call on the Alcade for the necessary police aid in making inspection of such place or premise, and it will be the duty of the Alcade to furnish such assistance upon request.

SECTION 11.—The Health Officer or his representative shall examine into complaints concerning nuisances believed to be dangerous or injurious to health.

SECTION 12.—No building of any kind or nature whatsoever shall be erected upon or in any section of the Cities of Colon or Panama that is not provided with water and sewer systems and paved streets; and it is illegal for the Health Officer to approve any plan or issue permit for the construction of any building in such unimproved district.

SECTION 13.—In the event a building is constructed in an unimproved district in violation of section 12 of these regulations, the owner or person in charge shall be required to tear down and remove said building within fifteen days after being notified to do so by the Health Officer. Upon failure of the owner or person in charge to so remove such building, the Health Officer is empowered to tear down and remove the same; the cost of the labor of so doing shall be a charge against the owner of the building and shall constitute a lien on the material from such structure and the same shall be sold by the Alcade, when requested by the Health Officer, at public sale, to satisfy the cost of the work and the expenses of the sale, and the balance of the proceeds, if any, of such sale, shall be paid to the owner of the structure.

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SECTION 14.—All garbage shall be placed in metal cans with tightly fitting covers, of a pattern approved by the Health Officer, and such cans must be put in a place convenient of access to the garbage collector. The contents of such cans must be emptied at least once in twenty-four hours and disposed of in a manner satisfactory to the Health Officer.

SECTION 15.—If the supply of water on any premises is shut off, or the premises become insanitary for any reason, the house in question may be closed by the Health Officer until the supply of water is again turned on or the premises put in a sanitary condition.

SECTION 16.—No person owning, occupying, or having charge of any building or premises, shall keep or allow thereon or therein any animal or bird in a manner detrimental to the life or health of any human being.

SECTION 17.—Any violation of the provisions of section 14 to 16, inclusive, of these regulations, shall be punished by a fine of not less than 5 balboas or more than 50 balboas[1] at the discretion of the Health Officer.

SECTION 18.—Every person living in the Cities of Colon and Panama, respectively, who has not been successfully vaccinated within five years, or who has not had an attack of smallpox (which facts shall be determined by the Health Officer), shall submit to vaccination to the satisfaction of the Health Officer; and it shall be the duty of every person having the care, custody or control of any minor or other individual over three months of age, to cause such minor or individual to be promptly and effectively vaccinated. Certificates of successful vaccination will be issued by the Health Officer or by other persons designated by that official. The Health Officer will perform vaccination gratis.

SECTION 19.—It shall be the duty of presidents, principals, managers, or any person having charge of any educational institution, orphanage, or asylum, or other place where children are educated, reared, or cared for, to exclude from such institutions all children who have not been successfully vaccinated or who are not immune from smallpox by having previously had an attack of that disease. It shall be the duty of principals, directors, or of any other person or persons in charge of such institutions, schools, or asylums, to require the vaccination of all children entering their institutions, immediately after they come under their care.

SECTION 20.—A failure to comply with any of the provisions of sections 18 and 19 of these regulations shall subject the person or persons thus offending to a fine of not less than 5 balboas nor more than 25 balboas for each offense.

SECTION 21.—The president, principal, manager, or any person having authority over educational institutions, orphanages, asylums, or other places where children are educated, reared, or cared for, shall safeguard the health of the pupils, inmates and attendants under his care, and shall see that the building is properly lighted and ventilated and that such building is kept clean.

SECTION 22.—Every physician, druggist, school teacher, clergyman,

[1] A balboa is worth fifty cents.

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midwife, nurse, every head of a family, or other person, having knowledge of any case of the following named diseases, shall immediately report the same to the Health Officer: Asiatic cholera, yellow fever, typhoid fever, typhus fever, smallpox, varicella, plague, diphtheria, membranous croup, scarlet fever, measles, leprosy, beriberi, cerebro-spinal fever, or infantile paralysis.

Every physician attending any case of the above-named diseases or one suspected of being such, or any sickness of an undetermined nature, shall report the facts to the Health Officer at once.

Any person who shall conceal, or fail to report any case of the infectious diseases above enumerated, shall be fined not less than 5 balboas nor more than 50 balboas.

SECTION 23.—Whenever a case of smallpox is reported to the Health Officer, he shall cause the person so afflicted to be removed to the hospital or other building designated for that purpose. The Health Officer shall cause to be thoroughly disinfected, all rooms, clothing, bedding and other articles of whatever nature that may have been exposed to infection and which, in his opinion, require disinfection. He shall make such other disposition of portable articles as may be necessary to protect the public health, and he may destroy, by burning, any such articles which cannot be disinfected, without compensation to the owner.

All persons living in a house from which a case of smallpox has been removed, and those living in adjacent houses, shall be vaccinated. All such contacts, as in the opinion of the Health Officer have been directly exposed to infection, shall be kept under surveillance for a necessary number of days to cover the period of incubation of the disease.

SECTION 24.—In the event of an epidemic of smallpox in either of the Cities of Colon or Panama, all persons residing in such city shall be vaccinated, irrespective of time of previous vaccination.

SECTION 25.—Whenever a case of yellow fever is reported to the Health Officer, it shall be his duty to cause the person afflicted to be removed to the hospital or other building provided for such cases. If, for any reason, the patient cannot be removed from the house in which he was taken sick, the following rules are to be observed:

(*a*) Those who care for the sick shall see at all times, both day and night, that the bed occupied by the patient is completely enclosed by mosquito netting, so as to make it mosquito-proof. The windows and doors of the room occupied by the patient must be at once screened against mosquitoes.

(*b*) The Health Officer shall see that the screening of the room occupied by the patient is satisfactory in all respects, and he shall cause to be screened such other rooms in the house as he may consider necessary.

(*c*) On the termination of the case or upon its removal to the hospital, the Health Officer shall cause to be made a thorough and careful fumigation of all rooms in the house where the case occurred, and, if in the judgment of the Health Officer, it is considered necessary for the public health, the neighboring houses shall also be fumigated.

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SECTION 26.—Any person who shall unlawfully remove, break, or otherwise injure screening used for the purpose of isolating persons sick from yellow fever, shall be punished by a fine of not less than 25 balboas nor more than 100 balboas, for each offense.

SECTION 27.—Whenever any case of Asiatic cholera is reported to the Health Officer he shall cause the person afflicted to be removed to the hospital or other building designated for that purpose, and the Health Officer shall cause to be carried out the necessary disinfection of the house and its contents, and of all persons that may have been in attendance upon the sick. All feces, urine or ejecta shall be thoroughly disinfected.

(*a*) All persons who have been exposed to a case of cholera must be held in quarantine or under surveillance and determination that they are not bacillus carriers, for a period of five days, dating from their disinfection.

(*b*) All persons who have been exposed to the infection of Asiatic cholera shall be examined bacteriologically to determine whether or not they are bacillus carriers; those found to be bacillus carriers shall be treated as a cholera patient. Those who have had Asiatic cholera shall not be discharged until free from bacilli.

(*c*) All foodstuff found in a house at the time of the occurrence of a case of cholera, which, in the opinion of the Health Officer, may be contaminated, shall be destroyed, and all water and water containers shall be disinfected.

SECTION 28.—Upon the appearance of a case of cholera, the Health Officer may prohibit the sale of such articles of food or drink, as, in his opinion, may be liable to convey infection; and shall promulgate general regulations governing the sale of all foodstuffs and beverages; and when such articles are exposed for public sale, they shall be protected against flies, dust and dirt. All articles of food and drink, which in the opinion of the Health Officer, may convey infection, shall be condemned and destroyed in the interest of public health and without compensation to the owner.

Any person who shall sell or offer for sale any article of food or drink after the sale of the same has been prohibited by the Health Officer in accordance with the provisions of this section, shall be punished by a fine of not less than 25 balboas nor more than 100 balboas, for each offense.

SECTION 29.—Whenever a case of plague is reported to the Health Officer, it shall be his duty to cause the person afflicted to be removed to the hospital or other building provided for such cases.

(*a*) The Health Officer shall cause to be carried out all necessary measures for a thorough cleaning and disinfection of the house in which the case of plague occurred. He shall cause to be carried out measures against fleas and rats; and where the construction of the house necessitates it, the floor shall be removed and a proper cement one installed by the owner of the same. In the event the house is old and dilapidated, and in the opinion of the Health Officer is a menace to public health, he may cause the same to be destroyed, without compensation to the owner.

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(*b*) All contacts, and persons who, in the opinion of the Health Officer, have been exposed to infection, shall be kept in quarantine or under surveillance for a period of seven days. Such effects, as in the opinion of the Health Officer require disinfection, shall be thoroughly treated.

SECTION 30.—Whenever cases of typhus fever, diphtheria, typhoid fever, scarlet fever, membranous croup, measles, infantile paralysis, cerebrospinal fever, or beri beri, are reported to the Health Officer, he shall take such precautions as shall protect the public health, adopting and publishing such special rules and regulations as may be necessary to prevent the spread of any of the diseases and for the guidance of those who may have been exposed to such diseases.

SECTION 31.—All cases of leprosy, in which the diagnosis is confirmed by a bacteriological examination, shall be sent to the colony provided for the isolation of such cases.

SECTION 32.—Any person detained in quarantine or detained at any place under surveillance, who shall leave the quarantine station or place where he is held under surveillance, without permission from the Health Officer or his representative, shall be fined not less than 25 balboas nor more than 100 balboas for each offense.

SECTION 33.—Any undertaker or person having in his care or possession, or who is preparing for burial, the body of a person who has died of smallpox, scarlet fever, diphtheria, membranous croup, typhus fever, plague or Asiatic cholera, shall give immediate notice to the Health Officer of the name of the deceased, the place of death and time of burial; upon failure to give such notice he shall be subjected to a fine of not less than 10 balboas nor more than 50 balboas.

SECTION 34.—It shall be the duty of any undertaker or person caring for the body of a person who has died of any of the diseases specified in section 33, to proceed in the following manner: At the time of his first visit to the house occupied by the deceased, he shall cause the body to be disinfected by wrapping it in several thicknesses of cloth wrung out of a solution made by dissolving 60 grains of corrosive sublimate and 2 tablespoonsful of common salt in 1 gallon of hot water, or out of a solution made by dissolving 6 ounces of pure carbolic acid in a gallon of hot water, or out of a 40 per cent. solution of formaldehyde, 1 part to 4 parts of water. Every part of the body shall be enclosed in the cloth and not thereafter be exposed to view.

Failure to comply with the provisions of this section will subject the offender to a fine of not less than 10 balboas nor more than 50 balboas.

SECTION 35.—The funeral of a person dying of any of the diseases mentioned in section 33, shall be private. No person, excepting the undertaker, his assistant, or persons in charge of the body, the clergyman, and immediate family of the deceased, shall attend.

No person shall enter the room or apartment containing the body of the person who dies of any of the diseases mentioned in section 33, except the

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persons above specified, the Health Officer and his representative, until the premises have been disinfected.

Any person violating any provision of this section shall be fined not less than 5 balboas nor more than 25 balboas.

SECTION 36.—No interment of the dead body of any human being or disposition thereof in any tomb, vault, cemetery, or crematory, shall be made within the Cities of Colon or Panama, without a permit from the Health Officer, who may prescribe the manner of interment or other disposition of the body. No sexton or other person shall assist in, or assent to, or allow any such interment, or aid or assist about preparing any grave or place or depository for any such body, or assist in the cremation of the same for which a permit has not been given, authorizing the same; and it shall be the duty of the person who shall receive any such permit, to preserve and return the same to the Health Officer of the respective city after the interment or other disposition of such body, stating thereon the date and time of such interment, or other disposition, the number of grave or receptacle in which the body was buried or sealed. No permit for the burial of the body of any human being will be issued by the Health Officer unless application for such permit is accompanied by a certificate of death signed by a registered physician.

SECTION 37.—The removal of any body from its original place of interment shall only be allowed after said body has been buried for a period of eighteen months, and then only by written permission granted by the Health Officer of the respective city; *PROVIDED*, That no disinterment of the remains of bodies of persons who have died of plague, smallpox, Asiatic cholera shall be allowed.

SECTION 38.—Every person who inters, disposes of, or disinters the dead body of any human being without the written permit required by sections 36 and 37 of these regulations, shall be fined not less than 10 balboas nor more than 50 balboas; and any person who disinters the body or remains of any person dead from smallpox, plague, or Asiatic cholera, shall be fined not less than 100 balboas nor more than 500 balboas.

SECTION 39.—No building shall be erected or converted into or used as a slaughterhouse in the Cities of Colon or Panama, until the plans thereof have been duly submitted to the Health Officer and approved in writing by said officer; and no building occupied as a slaughterhouse, or any part thereof, or any building on the same lot, shall be occupied at any time as a dwelling or lodging house. All slaughterhouses shall be kept adequately and thoroughly ventilated.

(*a*) All floors where any meat, refuse, offal, fertilizer, or any other material derived directly or indirectly from the slaughtering of animals is treated or handled, must be paved with cement, asphalt, or other impervious material, so constructed as to prevent leakage to soil beneath. No wood floors will be permitted.

(*b*) The walls of the killing, meat dressing, and cooling rooms shall be covered to a height of 6 feet above the floor with non-absorbable material.

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All slaughterhouses and stables connected therewith must have proper water and sewer connections, and the yards, other than where cattle are kept, must be concreted or paved with impervious material so as not to absorb liquid filth and be so graded as to permit the flow of the same into the sewer.

(*c*) Every slaughterhouse shall be provided with covered, water-tight receptacles for the immediate reception of all offal, the same to be removed, emptied, and cleaned immediately after the slaughtering of animals. All offal to be disposed of in a manner satisfactory to the Health Officer.

Every person, firm, association, or corporation, failing to comply with any of the provisions of this section relative to slaughterhouses, shall be fined not less than 25 balboas nor more than 100 balboas.

SECTION 40.—All cattle slaughtered in the Cities of Colon and Panama, respectively, and intended for human consumption, shall be inspected by the city veterinarian or by a representative of the Health Officer; such cattle as are found to be diseased shall be rejected for slaughter; the carcasses and viscera of all slaughtered cattle shall be inspected before removal from the slaughterhouse, and such as are found diseased shall be condemned and disposed of in a manner satisfactory to the Health Officer.

SECTION 41.—No cattle shall be killed for human food in the Cities of Colon or Panama while such cattle are in a diseased, overheated, feverish, or exhausted condition. No calf less than four weeks old, no pig less than five weeks old, and no lamb less than eight weeks old, shall be killed for human food or be kept and offered for sale as such.

SECTION 42.—The transportation of all meat from the slaughterhouse to the meat markets, public or private, shall be in a manner, approved by the Health Officer, as will protect the meat from contamination by dirt, dust, or flies.

SECTION 43.—Any person, firm, association or corporation, failing to comply with any of the provisions of sections 40, 41, and 42 of these regulations, shall be fined not less than 25 balboas nor more than 100 balboas for each offense.

SECTION 44.—All buildings used as public markets must have a floor of concrete, asphalt, or other impervious material; with the proper sewer and water connections; must be well lighted and ventilated; and before the construction and alteration of any building intended for use as a public market is commenced, the plans and specifications for the same must be submitted to the Health Officer and approved by him.

(*a*) In every public market there shall be set aside a section for the exclusive sale of meats, also a section for the exclusive sale of fish. These sections shall be made flyproof by the use of metallic screening, and in a manner satisfactory to the Health Officer.

(*b*) All articles of food attractive to flies, kept, held, or offered for sale in public markets shall be protected, by proper screening or otherwise, against contamination by flies or other insects.

(*c*) All tables or counters where meat or fish are offered or held for sale

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must have glass, slate, marble, or metal top, and the same kept in a clean condition.

(*d*) The space beneath all tables and counters must be left open, without a compartment of any kind.

SECTION 45.—In all public markets a sufficient number of garbage cans of a pattern approved by the Health Officer shall be provided. The garbage cans must be kept closed at all times when garbage is not being deposited therein, and the person failing to observe this rule will be punished as hereinafter provided. The floors, tables, and stalls must be thoroughly cleaned daily, immediately after the closing of the market, and garbage of any kind shall be immediately removed therefrom. The custodian or janitor of any public market will be held responsible for the cleanliness and sanitary condition of the market under his charge or control.

SECTION 46.—All private markets or other places; all street venders, whose business is the buying, selling, or keeping for sale of meats, fish, confections, or other foodstuffs, or drinks, attractive to flies, shall have such articles properly protected against contamination from flies, dust or dirt, by metallic screening or by other means, and in a manner satisfactory to the Health Officer.

SECTION 47.—Any person, firm, association or corporation failing to comply with any of the provisions of sections 44, 45, or 46 of these regulations, shall be fined not less than 5 balboas nor more than 25 balboas for each offense.

SECTION 48.—No article of food or drink shall knowingly be sold, held or offered for sale, or any representation made in respect thereto under a false name or quality, or as being what the name is not, as to its wholesomeness, soundness, or safety for food or drink.

SECTION 49.—The Health Officer or his representative is hereby empowered and directed to immediately condemn any articles of food or beverage, which, in his opinion, are unwholesome or unfit for human food or drink, and he may require the owner or persons in charge of such condemned food or drink to remove the same to the garbage dump for destruction, without compensation to the owner.

(*a*) No article of food or beverage condemned by the Health Officer or his representative shall be sold or offered for sale or disposed of for human food or drink.

(*b*) When in the opinion of the Health Officer, cattle or fowl, by reason of disease or exposure to a contagious disease is unfit for human food, he may direct the same to be destroyed as dangerous to life and health and taken to the garbage dump for incineration, without compensation to the owner.

SECTION 50.—It shall be the duty of every manufacturer, importer, or other person manufacturing in or importing in the City of Colon or Panama any artificial or natural water, and all other nonalcoholic beverages for drinking purposes, to file with the Health Officer of the respective city the name of such water and the location from which it was obtained or manufactured.

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SECTION 51.—No person shall manufacture or bottle mineral, carbonated, or table water, or other non-alcoholic beverages or import them into the City of Colon or Panama without a permit from the Health Officer.

SECTION 52.—The Health Officer or his representative is hereby authorized to freely and fully inspect the cattle and articles of food and drink held or kept by any person, firm, association, or corporation and intended or offered for sale; and every such person, firm, association or corporation will be expected to answer all questions asked by the Health Officer or his representative relative to the condition of such cattle, foodstuffs, or drinks, and of the places where the same may be kept or stored.

SECTION 53.—Any person, firm, association or corporation failing to comply with any of the provisions of sections 47 to 52, inclusive, of these regulations, shall be fined not less than 5 balboas, nor more than 25 balboas for each offense.

SECTION 54.—All bakeries shall be located in buildings which shall be well lighted, ventilated, and clean. All floors shall be of concrete or of other impervious material.

SECTION 55.—All kneading and mixing troughs shall have tight joints and covers of a perfect fit. All kneading tables shall be made of one piece of lumber or all pieces jointed so closely that no cracks or other inequalities of surface will permit of an accumulation of flour, dough or dirt. All troughs, tables, and utensils used in making bread and pastry shall be kept clean and, for the purpose of cleaning the floor, they must be capable of being moved about.

SECTION 56.—Every bakery shall be fitted with self-closing, wire-screened doors and wire-screened windows, so as to be kept free from flies.

SECTION 57.—No person shall sleep or live in any bakery or in the room where flour or meal is used in connection therewith, or the food products made therein, are handled or stored.

SECTION 58.—All workmen and employees, while engaged in the manufacture or handling of bakery products in a bakery, shall provide themselves with shoes and a suit of washable material which shall be used for that purpose only. These garments shall at all times be kept clean. Clothes that are worn on the street must not be worn in the bakery. A separate room for changing the clothing shall be provided which shall be equipped with a lavatory.

SECTION 59.—No person who has consumption, scrofula, or any contagious or infectious disease, shall work in any bakery, and no owner or person in charge of any bakery shall knowingly permit or suffer such a person to be employed in or to enter the mixing room of such a bakery.

SECTION 60.—All rooms for the storage of flour and meal for use in connection with any bakery, or for the storage of materials and food products in connection therewith, shall be kept clean, dry and well ventilated.

SECTION 61.—All persons employed in bakeries or who handle the materials therein from which food is prepared, or the finished product thereof,

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shall wash their arms and hands thoroughly with soap and clean running water before beginning work and immediately after visiting a toilet.

SECTION 62.—All products of a bakery must be kept in compartments where they will be protected against dirt, dust and flies.

SECTION 63.—The Health Officer or his representative shall have the right at all times, to enter into and make inspection of any bakery as often as he may deem necessary.

SECTION 64.—Every person failing to comply with any of the provisions of sections 54 to 63 inclusive, of these regulations, shall be fined not less than 1 balboa nor more than 25 balboas.

SECTION 65.—No person, firm, association or corporation, shall engage in the sale or distribution of milk in the City of Colon or Panama, without first obtaining a permit therefor from the respective Health Officer. Any violation of this provision shall be punished by a fine of not less than 5 balboas nor more than 25 balboas for each and every day on which the business of selling or distributing milk without a permit is carried on. The permit above mentioned must be renewed on or before the first day of January each year, and may be suspended or revoked by the Health Officer, at any time for cause, and the revocation of the permit for cause shall work a cancellation of the municipal license issued to the delinquent. The permit number and name of the owner must be displayed in a conspicuous place on the vehicle or carrier or on the container in which the milk is distributed.

SECTION 66.—Cow stables shall be used for no purpose other than that for keeping of cows, and shall be well lighted, ventilated and clean. The floors shall be of concrete or other impervious material, with sufficient grade to insure drainage. There shall be a concrete gutter constructed at the rear of each row of stalls, with a sufficient grade to insure adequate drainage of all liquid waste from the stalls. All manure shall be removed twice daily and disposed of so as not to be a source of danger to the milk, either as furnishing a breeding place for flies or otherwise, and no manure shall be removed during the milking or within one hour prior thereto.

No stagnant water, hog pen, privy, or cesspool, shall be maintained within 100 feet of cow stables.

Whenever cereals are used as cow feed, the same shall be stored in metal-lined boxes.

SECTION 67.—Every dairy shall be provided with a milk room that is clean, light, properly ventilated, and screened against flies, which shall be used for no other purpose than that for the cooling, bottling and storage of milk and operations incident thereto. It shall have no direct connection with any stable or dwelling.

The floor shall be of cement or other impervious material, properly graded and drained. All drains shall discharge at least 100 feet from any milk room or cow stable.

SECTION 68.—All utensils and apparatus with which milk comes into contact shall be thoroughly washed and sterilized by means of boiling water,

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and no milking utensil or apparatus shall be used for any other purpose than that for which it was designed. Small-top milking pails shall be used.

All milk cans and bottles shall be cleaned as soon as possible after being emptied.

SECTION 69.—No milk bottle or can shall be removed from a house in which there is or in which there has been recently a case of a communicable disease, until permission in writing has been granted by the Health Officer.

SECTION 70.—All employees connected in any way with the handling of milk shall be personally clean, and shall put on clean suits immediately before milking, and their hands shall be washed and dried immediately before milking each cow. No person suffering from any communicable disease shall be connected with the handling of milk and the Health Officer shall be notified at once of any such person among the employees.

SECTION 71.—A physical examination of all cows shall be made at least once in every six months by the city veterinarian or a representative of the Health Officer.

(*a*) All diseased cows shall be removed from the herd at once and no milk from such cows shall be offered for sale.

(*b*) A tuberculin test of all cows shall be made once a year by the city veterinarian or by a representative of the Health Officer. All cows that react to the tuberculin test shall be removed from the herd at once, and no milk from such cows shall be sold as raw milk.

(*c*) No cows shall be added to the herd until they have passed a physical examination and a tuberculin test.

(*d*) A certificate from the city veterinarian or the representative of the Health Officer showing the result of all examinations shall be filed with the Health Officer within ten days after such examination. Certificates for such cows as shall be rejected, after examination by the city veterinarian or the representative of the Health Officer, shall be given a number, which number shall be permanently attached to the cow and a description furnished, sufficiently accurate for the identification of such cow.

SECTION 72.—Milk stored, sold, or offered for sale in the City of Colon or Panama, should contain not less than 3 per cent. of butter fat, nor more than 88 per cent. water, nor less than 12 per cent. total solids, and have a specific gravity of not lower than 1.029, nor higher than 1.033. All milk of a lower grade than specified above is below standard and shall be regarded as adulterated and impure, and shall be condemned as unfit for food and destroyed by the Health Officer or his representative at time of inspection.

The provision of this section shall not apply to modified milk, skim milk, or pasteurized milk sold or offered for sale as such under a permit therefor from the Health Officer, when such modified milk, skim milk or pasteurized milk is so labeled.

SECTION 73.—Any milk found to be adulterated, which has been brought into the City of Colon or Panama, or is held or offered for sale therein, may be seized and destroyed by the Health Officer or his representative.

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No compensation shall be allowed for any milk destroyed under the provisions of these regulations.

SECTION 74.—Milk shall not be stored in or sold from a living room, or from any other place which might render it liable to contamination.

All places in which milk is sold or offered for sale shall be provided with a suitable room or compartment in which the milk shall be kept; said compartment shall be kept clean and so arranged that the milk will not be liable to contamination of any kind.

SECTION 75.—The Health Officer or his representative shall inspect dairies and places where milk is sold and offered for sale as often as he deems necessary.

SECTION 76.—Any person, firm, association, or corporation failing to comply with the provisions of sections 65 to 75, inclusive, of these regulations, shall be punished by a fine of not less than 5 balboas nor more than 25 balboas for each offense.

SECTION 77.—The Health Officer or his representative shall have the authority to inspect and take samples of the milk sold or offered for sale in the City of Colon or Panama, to determine the quality thereof and to ascertain whether or not the milk sold or offered for sale is adulterated or impure.

SECTION 78.—No person shall keep or cause to be kept at any place within the City of Colon or Panama, any cattle having the disease known as glanders or farcy, or any other contagious disease, and the owner or person in charge of any such cattle shall report forthwith the fact to the Health Officer. The owner or person in charge of such cattle shall either remove or destroy the same when required to do so by the Health Officer. Every person who destroys any such cattle shall immediately notify the Health Officer of such destruction, the place of destruction, and the disposition of the body of such animal.

No compensation shall be allowed the owner of cattle destroyed under this section.

Any owner or person in charge of cattle diseased as specified in this section, who fails to report the same to the Health Officer, shall be fined not less than 25 balboas nor more than 100 balboas for each offense.

SECTION 79.—All establishments for the manufacture and bottling of aerated waters and other non-alcoholic beverages shall be well lighted and ventilated, and shall have floors of concrete or other impervious material, the same to be properly graded and trapped to sewer when practicable.

(*a*) No water closet or urinal shall be installed in the room or rooms in which any part of the manufacturing or bottling of such waters or beverages is carried on; only flush water closets will be permitted in any part of said building. All such establishments shall have a lavatory with running water for the use of its employees.

(*b*) No person shall be employed in the process of manufacture or bottling of such waters or beverages, who has consumption, any infectious disease, or skin eruption.

(*c*) Bottles shall be washed in the following manner: Soaked in a solu-

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tion of caustic soda, 8 pounds to 100 gallons of water; then passed through two washings of clean water; set in clean boxes, neck downward, until ready to be filled.

SECTION 80.—All water used in the manufacture of aerated or carbonated waters or non-alcoholic beverages shall be drawn from the municipal water supply of the city in which such establishment is located, or from a supply of equal purity, approved by the Health Officer. If, at any time, the water supply is deemed unsatisfactory, the manufacturer of the aerated or carbonated waters or beverages shall use such other water supply as shall be designated by the Health Officer.

SECTION 81.—In every bottling establishment there shall be provided a screened flyproof compartment, in which shall be stored the sirups or flavoring extracts and other ingredients used in the manufacture of sirups. All preparation of such sirups shall be carried out in this flyproof compartment. The reservoir from which sirups are fed into the charging machine must also be kept flyproof.

SECTION 82.—Every bottle of aerated or carbonated water or beverage sold, held, or offered for sale, shall have a label showing the name of the contents of the bottle and by whom and where manufactured. Any bottle of such water or beverage found without the label specified shall be confiscated and destroyed, without compensation to the owner.

SECTION 83.—Every manufacturer of aerated or carbonated waters or beverages, shall file with the Health Officer samples of all labels used by said manufacturer. No change shall be made in labels without first notifying the Health Officer and furnishing sample of same.

SECTION 84.—Any person, firm, association or corporation failing to comply with any of the provisions of sections 79 to 83, inclusive, of these regulations, shall be fined not less than 25 balboas nor more than 100 balboas.

SECTION 85.—All places used as barber shops, and all furnishings therein shall be kept clean at all times.

(*a*) The floors must be kept free from hair and swept or mopped every day, and all furnishings and fixtures kept free from dust.

(*b*) All combs, razors, mugs, scissors, clippers, hairbrushes, shaving brushes and other tools and appliances shall be sterilized after use on each person, by immersion in boiling water, or in alcohol of at least 60 per cent. strength.

(*c*) No barber shop shall be used as sleeping quarters.

(*d*) Clean towels shall be used for each person.

(*e*) The use of powder puffs and sponges is prohibited.

(*f*) Alum or other material used to stop the flow of blood shall be used in powdered form only, and shall be applied by a clean towel.

Any person failing to comply with any of the provisions of this section shall be fined not less than 1 balboa nor more than 10 balboas.

SECTION 86.—No person shall permit or have any offensive water, liquid, or substance on his premises or grounds, to the prejudice of life or health whether for use in any trade or otherwise; and no establishment or place

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of business for storing, tanning, cleaning or scouring, or for dressing hides or leather, or for carrying on any offensive or noisome trade or business, shall hereafter be opened, started, established, or maintained in the City of Colon or Panama, without a permit from the Health Officer. Sites for such factory or establishment to be erected shall be within the area designated for such factories or establishments.

Every such establishment now existing shall be kept clean and so conducted in every particular as not to be offensive or prejudicial to life or health.

SECTION 87.—No swill, brine, urine of animals, or other offensive animal matter nor any stinking or noxious liquid or other filthy matter of any kind, shall be allowed to run or fall into or upon any street or public place or to be taken or put therein, and the person, firm, association or corporation responsible for the same, shall be punished as hereinafter described.

SECTION 88.—A violation of any of the provisions of sections 86 and 87 of these regulations shall be punished by a fine of not less than 25 balboas nor more than 100 balboas for each offense.

SECTION 89.—No tanks, wells, barrels, or cisterns of any kind, for the collection or storage of any water, shall be permitted, except in those districts in the Cities of Colon and Panama which are without a public water supply and upon which buildings have already been erected. When such tanks, wells, barrels, cisterns or other receptacles for the collection or storage of water are permitted, they shall be made mosquito-proof to the satisfaction of the Health Officer. When cisterns or wells are used as a source of supply, the water must be taken therefrom by means of a pump. All unauthorized cisterns or wells shall be filled to the level of the ground surface or otherwise destroyed.

Any person who shall unlawfully destroy any mosquito proofing provided for in this section shall be punished as hereinafter provided.

SECTION 90.—The throwing of tin cans, bottles, cocoanut shells, husks, broken crockery, or anything that may hold water and thereby become a breeding place for mosquitoes, into any street, yard, alleyway, or patio and on any premises or property whether occupied or unoccupied, is prohibited. All ponds, pools, marshes, or seepage areas within the corporate limits of the Cities of Colon and Panama, respectively, in which mosquitoes might breed, must be drained, filled or oiled, as may be deemed best by the Health Officer.

SECTION 91.—The breeding of mosquitoes in or on any place or premises is declared to be a nuisance.

SECTION 92.—All premises must be kept in such a condition as to prevent mosquito breeding, and upon failure of the owner, agent, or occupant of such premises to correct the unsanitary conditions thereon after notice from the Health Officer or his representative, he shall be fined as hereinafter provided and the Health Officer may proceed to correct such condition, the cost of the same to be a charge against the delinquent person to be collected under execution against his property.

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SECTION 93.—A violation of any of the provisions of sections 89 to 92, inclusive, of these regulations, shall be punished by a fine of not less than 5 balboas nor more than 25 balboas for each offense.

SECTION 94.—Stables shall be built in accordance with plans and specifications approved by the Health Officer and a permit must be secured before work can be commenced. Stables shall have water and sewer connections, and good ventilation. The stalls shall be approximately 10 feet long, 5 feet 6 inches wide, and 10 feet high at entrance. The floor shall be of concrete.

(*a*) It is optional whether the cement floor shall be covered with planks or wooden gratings. If so covered, such planks or gratings shall be removable and not fastened to the floor.

(*b*) A cement gutter shall be constructed immediately to the rear of all stalls and trapped to the sewer.

(*c*) Floors of stalls shall have sufficient slope to carry all liquid waste to the gutter.

(*d*) When two rows of stalls are constructed, with a space between, this entire area shall be cemented.

(*e*) Each stable must be provided with a cemented area of sufficient size upon which carriages and animals are washed. This area shall be properly graded and trapped to sewer.

(*f*) All bins or boxes in which grain is stored or kept shall be lined with tin, zinc, or similar material.

SECTION 95.—All manure from each stable shall be removed therefrom at least once in twenty-four hours and disposed of as the Health Officer may direct.

SECTION 96.—Any person, firm, association or corporation failing to comply with any of the provisions of sections 94 and 95 of these regulations, shall be punished by a fine of not less than 25 balboas nor more than 100 balboas.

SECTION 97.—**Adjoining Owner.**—The owner of a premise adjoining those under construction, or adjoining the property of the building owner.

Alterations.—Any change, addition, or modification in the construction.

Additions.—Any change which increases the area covered by the building or any part thereof.

Building.—Anything erected or fixed upon or in the soil, composed of different pieces connected together and designed for use in the position in which so fixed.

Building Line.—A line beyond which property owners or others have no legal or vested right to extend a building or any part thereof without special permission and approval of the proper authorities.

Building Owner.—The owner, agent or person in charge of the building under construction.

Frame Building.—A house or building built on wooden framework.

External Wall.—An outer wall or enclosure of a building other than a party wall.

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First Story.—The story or floor which is first above the level of the sidewalk or adjoining ground.

Foundation Wall.—The lowest and supporting part or member of a wall, including a base course and footing courses; in a frame house, the whole substructure of masonry.

Partition.—An interior wall constructed of wood, laths and plaster, or other material than masonry.

Partition Walls.—Any interior wall of masonry in a building.

Party Wall.—A wall upon the dividing line between adjoining premises for their common use.

Repairs.—The removal of any part of a building, or of its fixtures, or its appurtenances, where the work or substituted material will not affect the safety or structural integrity of the building; where such parts are affected the work shall come under the definition of an alteration.

Shed.—A rough or unfinished structure for storage or an open structure for temporary shelter.

Thickness of Wall.—The minimum thickness of such wall.

Alleyways.—The space between buildings on adjoining lots.

Patio.—Open inner space, clear from ground to sky.

SECTION 98.—Any person, firm, association, or corporation, intending to erect any building or to make any additions, alterations, or repairs to any building in the City of Colon or Panama, shall first submit to the Health Officer for approval, architect's plans and specifications of the proposed construction or improvement, which shall show the name of the owner of the lot or lots on which the proposed construction, alteration or repair is to be made, and the name of the owner of the proposed building or improvement, together with the general dimensions of the proposed construction or improvement; the number of height of stories; the character of the material to be used; whether the ground floor is to be cemented or the house to be raised above the ground upon pillars. The elevation of the building above the street and correct grade of lot or lots shall be given by proper authority.

In the case of small buildings of one story, occupying not more than 800 square feet ground space, a builder's drawing may be submitted in lieu of architects plans.

SECTION 99.—Upon the approval of the plans and specifications by the Health Officer he may grant a written permit to the person submitting them, to proceed with the construction of the building or improvements therein set forth, as the case may be, on the lot or lots referred to in the plans.

Should the Health Officer disapprove the plans and specifications submitted to him as above mentioned, he should notify the Alcade in writing, of his reasons for such disapproval.

The building permit, with plans and specifications, shall be kept at the building under construction and shall be accessible to the Health Officer or his representative during working hours.

SECTION 100.—No permit shall be issued for a new building to a person, firm, association or corporation having other buildings in an unsanitary con-

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dition, until such buildings have been put in the condition required by the sanitary and building rules and regulations.

SECTION 101.—Plans which contemplate more than one building to the width of any single lot will not be approved in the City of Colon.

In the City of Panama, where it can be shown to the satisfaction of the Health Officer that the width of the lot is sufficient, a permit for the erection of more than one building on such lot, will be granted, provided that such buildings are built with a common wall, or if without a common wall, a space not less than 3 feet, clear from ground to sky, is left between such buildings.

SECTION 102.—The lot or lots on which buildings are to be constructed shall be filled to a uniform grade. Where the buildings are to be constructed on a lot or lots with a sloping surface, the lot or lots shall be properly graded; such grading or filling shall be done to the satisfaction of the Health Officer. When a cut has been made into a hill to obtain a building site, there must be left a space between the building and the foot of the slope of not less than one and a half times the height of the slope. No lot or part thereof shall be filled with any material containing putrescible animal or vegetable matter, tin cans, bottles, or anything of a like nature.

No work shall be done on any lot or lots before they have been filled and have settled to their proper level, except the location of masonry, pillars or foundation walls, which may be built before the lots are filled.

SECTION 103.—The foundation walls or piers shall be of such a depth as will afford a solid footing; the depth in no case to be less than 12 inches, except where such foundation walls or piers are built upon solid rock; foundation walls of frame buildings having concrete floors shall rise not less than 10 inches above the street curb, and will be of such strength as will support in safety, the weight of the building.

SECTION 104.—All building material shall be of such quality and dimensions as may be considered by the Health Officer consistent with public health and safety.

SECTION 105.—All buildings shall have a first floor of concrete, when in the opinion of the Health Officer, this is practicable. If it is desired to place a wooden floor over the concrete floor, sleepers not less than 2 inches by 2 inches shall be embedded in the concrete with the upper surface flush with the top of the same. Over these sleepers the wood floor must be nailed, and there shall be no free space between the wood and the concrete.

SECTION 106.—There shall be a clear space not less than 3 feet between the ground and the sills of any house, except in buildings erected as in section 105. In case the building is located on sloping ground, the sills of the building on the end nearest the ground must be not less than 18 inches above the ground level.

No refuse or material of any kind shall be stored or allowed to remain in the space beneath the house.

SECTION 107.—When buildings are constructed (unless in block formation) with party walls or adjoining walls without intervening space, there

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shall be a space between adjoining buildings of not less than 3 feet, clear from ground to sky; provided that those lots in the City of Colon beginning at the east side of "E" Street, as shown on Panama Railroad map of said city, shall have a clear space from ground to sky of 10 feet between adjoining buildings.

SECTION 108.—When two or more buildings are to be erected, from front to rear, on a single lot, there shall be a space of not less than 10 feet clear from ground to sky between buildings.

SECTION 109.—There shall be no frame buildings erected which provide for more than a single wall, except upon permission in writing from the Health Officer, and when double walls are allowed it shall be stipulated in the permit that there shall be at least 8 inches of concrete between the walls immediately above the sills of each floor, placed in such manner as to entirely fill all openings.

SECTION 110.—No building shall have a living or bedroom smaller than 10 feet by 10 feet by 10 feet and each room shall have not less than one window, 3 feet by 5 feet, and one door not less than 2 feet 6 inches by 7 feet, one of which shall open on a yard, street, alley, or patio.

SECTION 111.—In all tenement or lodging houses there shall be an opening over each door and for 12 inches above. This opening may be protected by wire screening or battens, the battens not to diminish the ventilating space by more than one-third.

SECTION 112.—All buildings of more than one story shall be provided with a stairway not less than 3 feet wide for every 12 rooms or major fraction thereof.

SECTION 113.—Balconies may extend to the curb of streets. Balconies that do not extend to the curb shall not exceed 3 feet in width and shall be supported by brackets of sufficient strength. No balcony shall be less than 2 feet 6 inches in width. No passage through a house shall be less than 3 feet in width.

SECTION 114.—The minimum clear space to be allowed for bath and water closet fixtures, shall be as follows: Water closets, 3 feet by 4 feet; shower baths, 3 feet by 4 feet; bath tubs, 5 feet by 6 feet.

SECTION 115.—Kitchen space shall be provided for on each floor of a tenement house, at the rate of six (6) square feet for each living room thereon.

SECTION 116.—Each building must contain a sufficient number of baths, water closets, and sinks, to comply with plumbing regulations, and they shall be distributed in such manner as to be convenient of access to the occupants of the house.

SECTION 117.—Toilets and baths, wherever possible, shall be confined to one section of the building and shall have concrete floors, and be well lighted and ventilated.

In no case shall a toilet or bathroom open into a kitchen.

SECTION 118.—Attic space must have an opening into it of not less than 2 feet square and shall be closed by a trap door, which can be opened for the

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purpose of inspection; under no circumstances shall any article or articles of any nature whatsoever be stored in this attic space.

SECTION 119.—The space or alleyway between adjacent buildings shall be graded and cemented in such a manner that it will drain to the street gutter. All patios must be cemented, graded and trapped to sewer where practicable. When it is impracticable to trap the patio to sewer, the patio will be so graded that it will drain all water to the street gutters.

For the purpose of light and ventilation a patio of sufficient size, to be determined by the Health Officer, shall be left unoccupied from ground to sky.

SECTION 120.—The concrete for yards, alleys, and patios shall be not less than 3½ inches thick with a cement mortar finish of not less than ½ inch thickness.

SECTION 121.—New buildings, or old buildings having been vacated for the purpose of undergoing repair, shall not be occupied until the sanitary and building rules and regulations have been complied with, and a permit in writing to occupy the same has been obtained from the Health Officer.

SECTION 122.—All buildings of mamposteria construction shall have walls of sufficient thickness and strength to support the weight of the building and its contents.

(*a*) The walls shall have a cement mortar finish so as to leave a smooth finish and close all voids.

(*b*) All wooden partitions in a building of this type shall conform to the general building regulations governing the same.

SECTION 123.—The owner or occupant of any building which is fitted with gutters, pipes or other contrivances for the collection and discharge of rain water falling upon the roof of such building, will be required to maintain such gutters, pipes, or other contrivances, in such manner that it shall be impossible for water to collect and stand therein; and the Health Officer shall cause to be notified the owner or occupant of any building fitted with defective guttering, to alter or repair such guttering in the manner that the Health Officer may prescribe, within ten days from the receipt of such notice, and upon the failure or refusal of such owners or occupant to comply with such notice within the prescribed period of ten days, he shall not only be guilty of a violation of the sanitary rules and regulations, but it shall also be lawful for the Health Officer, or employee of the Health Department under his direction, to enter in and upon such building to remove and to repair or alter, as may be required, such gutters, pipes or other contrivances, for the collection and discharge of rain water; the cost of removal, the work of repair or alteration shall be a charge against the delinquent, and may be collected under execution against his property.

No gutter, pipe or other contrivance for the collection of rain water shall be placed upon any new building without the consent of the Health Officer, obtained at the time the plans are submitted for his approval and to be granted only when it shall appear that such gutter, pipe or other contrivance is indispensable for the protection of the proposed building

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or the neighboring property, and that such protection cannot be provided for by other practicable means.

SECTION 124.—Every building used as a dwelling shall have at least one water closet for each family, also one sink, and one bath. In a tenement, lodging house, boarding house, hotel or factory, there must be at least one water closet for every 15 persons or major fraction thereof, and one bath for every 25 persons or major fraction thereof.

SECTION 125.—The character of plumbing fixtures and the manner of their installation in any building in the Cities of Colon or Panama shall conform in every respect to the requirements of the plumbing regulations governing the sanitary installation of plumbing in the said cities.

SECTION 126.—No closed fences or other obstructions shall be built around any yard, alley, or patio in a manner to prevent close inspection or the free admission of light and air.

When the lessee or owner of a lot or lots desires to erect a fence thereon, it shall be either of wire netting or of pickets of wood or iron. These pickets not to be more than 6 inches, not less than 3 inches apart, and to be placed at least 4 inches above the surface of the ground.

SECTION 127.—Any person, firm, association or corporation, failing to comply with any of the provisions of sections 97 to 126, inclusive, of these regulations, shall be punished by a fine of not less than 10 balboas nor more than 100 balboas for each offense and in addition, houses erected in a manner other than as provided in approved plans, shall be reconstructed so as to conform to such plans.

SECTION 128.—The construction of a cesspool on any lot in the Cities of Colon or Panama where water or sewer connections are available is prohibited. In districts where buildings already exist and water and sewer connections are not available, a cesspool will be allowed, which shall be constructed in the following manner: The cesspool must not be less than 5 feet deep, 4 feet long, and 3 feet wide, the sides and bottom of which shall be of concrete or cement mortar to a thickness of 4 inches. The cement wall must be at least 18 inches above the surface of the earth, and the seat and house erected over the cesspool must be made flyproof.

(*a*) The cesspool must be properly ventilated by a pipe not less than 2 inches in diameter, which shall extend from the vault to a foot above the roof of the house. Cesspools shall be constructed so as to be easily emptied.

(*b*) The cesspool must not be located nearer than 18 feet to any house and not nearer than 100 feet to any well.

Any person, firm, association or corporation violating any of the provisions of this section shall be punished by a fine of not less than 5 balboas nor more than 25 balboas.

SECTION 129.—The Health Officer may condemn and cause to be removed any building that, in his opinion, may be a menace to public health or safety, and without compensation to the owner.

Upon failure of the owner, agent, or person in charge of such building to comply with the notice from the Health Officer to remove the same within

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fifteen days, the Health Officer may tear down and remove such building, the cost of same to be a charge against the delinquent owner, and the Alcalde, upon request of the Health Officer, shall sell at public sale, sufficient of the materials from the building to satisfy such costs.

SECTION 130.—The regulation relative to contagious diseases, issued by the Chief Sanitary Officer of the Isthmian Canal Commission on the 16th day of August, 1904, published in the Official Gazette, No. 44, of 1904, and Ordinance No. 6, issued by the Chief Sanitary Officer, on January 20th, 1905, are hereby repealed.

ARTICLE II

That the fines, penalties and forfeitures provided for in the foregoing regulations shall be imposed and collected by the said Chief Sanitary Officer through the respective Health Officers of the Cities of Colon and Panama, in conformity with said Decree No. 23, of July 8th, 1904.

ARTICLE III

If any person, firm, association or corporation, against whom a fine or other penalty has been imposed by the Health Officer, shall fail or refuse to pay or discharge such fine or penalty, the Health Officer having jurisdiction of the case may require the Alcade of the city to issue the proper order against the delinquent, directing the imprisonment of such delinquent in jail for a period of not to exceed one day of imprisonment for each balboa of fine or penalty.

ARTICLE IV

Whenever it becomes necessary under the foregoing regulations for the Health Officer to remove any unlawful structure or abate a nuisance of any kind, from any place, or to put any place or structure in sanitary condition, and the person, firm, association or corporation responsible for the cost of such work, in accordance with said rules, fails or refuses to pay off or satisfy such costs, the Health Officer having jurisdiction of the case may require the Alcalde of the city to issue an order of execution against the property of the delinquent to satisfy such costs and expense incident to the collection thereof; which order of execution shall direct that a sufficient amount of the property of the delinquent be seized and sold at public sale, and that out of the proceeds of such sale said costs and incidental expenses shall be paid, and the remainder, if any there be, shall be delivered to the delinquent or to his agent.

ARTICLE V

The Alcaldes of the Cities of Colon and Panama, respectively, are charged with a strict compliance with the requests made upon them by the Health Officers under the provisions of the foregoing regulations: and the Alcalde who, through negligence or temporizing, fails to comply with the requests

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so made by the respective Health Officers, shall be subject to a fine of not less than 5 balboas nor more than 100 balboas; and the respective governors shall impose this fine as soon as they are informed of the fault, and they shall also issue the proper order which should have been issued by the Alcalde in the case.

ARTICLE VI

It is the duty of the police to require a compliance with the foregoing sanitary regulations, and to report immediately to the respective Health Officers the names of those who in any manner disregard the regulations, so that the Health Officer may impose a corresponding punishment.

ARTICLE VII

The moneys collected from the fines, penalties or forfeitures imposed or declared under the foregoing regulations shall be paid into the municipal treasuries of the respective Cities of Colon and Panama, to be held as an emergency fund, and to be used only in special cases for sanitary purposes, upon the order of the Health Officers and the Alcaldes of Colon and Panama, respectively.

The following diet table has been employed in the hospitals of the Public Health Service. With such modifications only as climate and season may render necessary it is an excellent model for the subsistence service of eleemosynary institutions, and for the subsistence of military prisoners requiring an especially liberal dietary.

Breakfast		Dinner		Supper	
		Monday			
Coffee, pt	1	Vegetable soup, pt	1	Tea, pt	1
Bread, oz	6	Beef, boiled, oz	6	Bread, oz	6
Butter, oz	½	Potatoes, oz	8	Butter, oz	½
Meat hash with vegetables, oz	6	Pudding with sauce, oz.	4	Fruit sauce, oz	3
Stewed fruit, oz	3	Bread, oz	4		
		Tuesday			
Coffee, pt	1	Beef soup, pt	1	Tea, pt	1
Bread, oz	4	Beef, boiled, oz	6	Bread, oz	6
Butter, oz	½	Fish, fresh, oz	6	Butter, oz	½
Corned beef hash with potatoes, oz	6	Vegetables, oz	8	Fruit, stewed(a), oz	4
		Bread, oz	4		
		Fruit, oz	4		
		Wednesday			
Coffee, pt	1	Mutton broth, pt	1	Tea, pt	1
Bread, oz	6	Mutton, boiled, oz	6	Bread, oz	6
Butter, oz	½	Potatoes, oz	8	Butter, oz	½
Fish hash with vegetables, oz	6	Rice pudding with sauce, oz	4	Fruit, cooked, oz	4
		Bread, oz	4		

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THURSDAY

Coffee, pt	1	Soup bouillon, pt	1	Tea, pt	1
Bread, oz	6	Beef, roast, oz	6	Bread, oz	4
Butter, oz	½	Potatoes, oz	8	Butter, oz	½
Meat stew, oz	6	Bread, oz	4	Fruit pudding, oz	4
		Fruit, oz	4		

FRIDAY

Coffee, pt	1	Vegetable soup, pt	1	Tea, pt	1
Bread, oz	6	Meat stew, oz	8	Bread, oz	4
Butter, oz	½	Fish, oz	6	Butter, oz	½
Fish hash with vegetables, oz	6	Bread, oz	4	Cold meat, oz	4
		Vegetables, oz	8		
		Fruit, oz	4		

SATURDAY

Coffee, pt	1	Barley soup, pt	1	Tea, pt	1
Bread, oz	6	Mutton, boiled, oz	8	Bread, oz	4
Butter, oz	½	Bread, oz	4	Butter, oz	¾
Mutton chops, oz	6	Vegetables, oz	10	Rice with sauce or syrup, oz	4
Fried potatoes, oz	3				

SUNDAY

Chocolate, pt	1	Soup, pt	1	Tea, pt	1
Bread, oz	6	Beef, roast, oz	6	Bread, oz	6
Butter, oz	½	Potatoes, oz	8	Butter, oz	½
Meat stew, oz	4	Other vegetables, oz	4	Mush and milk, oz	12
Fruit sauce, oz	3	Rice or tapioca pudding, oz	4		

(a) Fresh fruit may be substituted in season.

NOTE.—The tea and coffee are prepared with milk and sugar. The quantities of the articles of diet indicate them as they are prepared ready to serve. The above tables give the four classes of solid constituents in substantially the following proportions: Nitrogenous material, about 140 grams; fat, about 62 grams; carbohydrates (starch, sugar, etc.), about 450 grams; and salines, about 26 grams; and with about 2250 grams of water. Although these quantities are somewhat in excess of the estimates for "healthy adults at rest," they are none too great for convalescents in whom tissue metamorphosis is being carried on, not only in the interest of repair of present waste from use, but in the interest of repair of past waste from disease, a point which should not be overlooked in the construction of hospital dietaries. In making any change from the above, the substantial articles should be in such quantities and of such kinds as to furnish constituents equivalent to those of the articles replaced.

EXTRA DIET

BREAKFAST		DINNER		SUPPER	
Mutton chop or beefsteak, oz	6	Chicken or game, oz	6	Dry or dip toast, oz	4
Eggs	2	Ale or wine			

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MILK DIET

Breakfast	Dinner	Supper
Hominy or corn-meal mush, oz. 14	Rice or tapioca (cooked), oz. 12	Cracked wheat or oaten grits (when cooked), oz. 14
Milk, oz. 16	Milk, oz. 16	Toasted bread, oz. 12
	Syrup, oz. 1	Milk, oz. 16
	Bread, oz. 4	
	Butter, oz. . . . . ½	

Ice in sufficient quantities for the preservation of rations in a small refrigerator is allowed.

Baking powders, yeast cakes, and flavoring extracts in sufficient quantities for cooking the above-mentioned articles are allowed.

The per capita cost of this dietary is greater than that of the Army ration, being less in the large hospitals than in smaller ones.

Publications of interest upon matters of public health are the following, namely:

"Communicable Diseases," by Kerr and Moll. (This is Public Health Bulletin No. 62—an analysis of the laws on this subject.)

"Organization, Powers and Duties of Health Authorities." (An analysis of the laws and regulations relating thereto, in force in the United States, by Kerr and Moll.) This is Public Health Bulletin No. 54.

This bulletin is supplemented annually by a publication from the Public Health Service, containing the State Laws and Regulations pertaining to public health enacted that year.

"Public Health Regulations," Health Department, New York City.

"Public Health Administration in Baltimore," by Fox. (This is Reprint 201 from Public Health reports.)

QUARANTINE SERVICE

The Quarantine Service of the United States is under the control of the Treasury Department, but several States, *e.g.*, New York, yet maintain a separate service of their own. The Quarantine Regulations are based upon statutory enactments and are executed by the Public Health Service. Late regulations of quarantine read as follows:

Quarantinable Diseases.—1. For the purpose of these regulations the quarantinable diseases are cholera, yellow fever, smallpox, typhus fever, leprosy, and plague.

FOREIGN REGULATIONS

Quarantine regulations to be observed at foreign ports and at ports in possessions and dependencies of the United States.

Bills of Health.—Masters of vessels clearing from any foreign port, or from any port in the possessions of the United States for a port in the United States or its possessions or other dependencies, must obtain an original bill of health, in duplicate, signed by the proper officer or officers of the United States as provided for by law, except as provided for in paragraph 4.

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FORM No. 1937.

UNITED STATES OF AMERICA.

ORIGINAL BILL OF HEALTH.

I————(the person authorized to issue the bill, at the port of————) do hereby state that the vessel hereinafter named clears from the port of———— under the following circumstances.

Name of vessel————Nationality————Rig————Master———— Tonnage, gross————net————Iron or wood————Number of compartments for cargo————for steerage passengers————for crew————

Name of medical officer————Number of officers————Of crew, including petty officers————of passengers, first cabin————second cabin————steerage ————Officers families————Total number of passengers on board————

Passengers destined for the United States————first cabin————second cabin ————steerage————Previous port————

Number of cases of sickness, and character of same during last voyage————

Number of cases of sickness, and character of same, while vessel was in this port———

Vessel engaged in————trade, and plies between————and————

Nature, sanitary history, and condition of cargo————

Source and wholesomeness of water supply————

Source and wholesomeness of food supply————

Sanitary history and health of officers and crew————

Sanitary history and health of passengers, cabin————

Sanitary history and health of passengers, steerage————

Sanitary history and condition of their effects————

Location of vessel while in port———wharf———open bay———distance from shore————Time vessel was in port————

Character of communication with shore————

Sanitary condition of vessel————

Sanitary measures, if any, adopted while in port————

Sanitary condition of port and vicinity————

Prevailing diseases at port and vicinity————

Malaria————deaths during month of————

Number of cases and deaths from the following named diseases during the past two weeks ending————:

Diseases	Number of cases	Number of deaths
Yellow fever.....		
Asiatic cholera.....		
Cholera nostras and cholerine.		
Smallpox.....		
Typhus fever.....		
Plague.....		
Leprosy.....		

REMARKS

Any conditions affecting the public health existing in port of departure or vicinity to be here stated.

When there are no cases or deaths, entry to that effect must be made.

I certify that the vessel has complied with the Quarantine Rules and Regulations made under the Act of February 15, 1893, and that the vessel leaves this port bound for ————United States of America, via————

Given under my hand and seal this————day of————191 .

Signature of consular officer————

(SEAL)

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Vessels clearing from a foreign port or from any port in the possessions or other dependencies of the United States for any port in the United States, its possessions or other dependencies, and entering or calling at intermediate ports, must procure at all said ports a supplemental bill of health in duplicate signed by the proper officer or officers of the United States, as provided by law. If a quarantinable disease has appeared on board the vessel after leaving the original port of departure, or other circumstances presumably render the vessel infected, the supplemental bill of health should be withheld until such sanitary measures have been taken as are necessary. (A form similar to that given above is prescribed.)

Under the act of Congress approved August 18, 1894, vessels plying between Canadian ports on the St. Croix River, the St. Lawrence River, the Niagara River, the Detroit River, the St. Clair River, the St. Mary's River, and adjacent ports in the United States on the same waters, also vessels plying between Canadian ports on the following named lakes: Ontario, Erie, St. Clair, Huron, Superior, Rainy Lake, Lake of the Woods, Lake Champlain, and ports in British Columbia, and adjacent ports in the United States; also vessels plying between Mexican ports on the Rio Grande River and adjacent ports in the United States are exempt from the provisions of section 2 of the Act granting additional quarantine powers and imposing additional duties upon the Marine Hospital Service, approved February 15, 1893, which requires vessels clearing from a foreign port for a port in the United States to obtain from the consular or medical officer a bill of health. During the prevalence of any of the quarantinable diseases at the foreign port of departure, vessels above referred to are hereby required to obtain from the consular officer of the United States, or from the medical officer of the United States, when such officer has been detailed by the President for this purpose, a bill of health, or a supplemental bill of health, in duplicate, in the form prescribed by the Secretary of the Treasury.

Vessels of the U. S. Navy may be granted the hereinafter stated exemptions from quarantine regulations, but are subject to quarantine inspection upon arrival at a port in the United States.

The certificates of the medical officers of the U. S. Navy as to the sanitary history and condition of the vessel and its personnel may be accepted for naval vessels by the quarantine officer boarding the vessel in lieu of an actual inspection.

Vessels of the U. S. Navy having entered the harbors of infected ports, but having held no communication which is liable to convey infection, may be exempted from the disinfection and detention imposed on merchant vessels from such ports.

GENERAL QUARANTINE REQUIREMENTS (FOREIGN AND INSULAR)

Vessels, prior to stowing cargo or receiving passengers, should be mechanically clean in all parts, especially the hold, forecastle, and steerage. Any portion of the vessel liable to have been infected by any communicable disease should be disinfected before the issuance of the bill of health.

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The air space, ventilation, food and water supply, hospital accommodations, and all other matters mentioned therein promotive of the health and comfort of the passengers must be in accordance with the provisions of the Act of Congress approved August 2, 1882, entitled "An act to regulate the carriage of passengers by sea."

Street sweepings, city cleanings, or anything containing organic refuse should not be taken as ballast from any port.

Bedding, upholstered furniture, soiled wearing apparel, personal effects, and second-hand articles of a similar nature, coming from a district known to be infected with cholera, smallpox, typhus fever, or as to the origin of which no positive evidence can be obtained, and which the consular or medical officer has reason to believe are infected, should be disinfected prior to shipment. In the case of typhus fever, the destruction of vermin should be assured. Articles similar to the above mentioned, if from a district infected by plague, should by inspected, and, if necessary, disinfected and treated to destroy vermin.

Articles from an uninfected district shipped through an infected port may be accepted without restriction if not exposed to infection in transit.

Any article shipped from or through an infected port or place and which the consul or medical officer has reason to believe infected, should be disinfected.

Any article presumably infected, which cannot be disinfected, should not be shipped.

Passengers, for the purposes of these regulations, are divided into two classes, cabin and steerage.

So far as possible, passengers should avoid embarking at a port where quarantinable disease prevails, and communication between the vessel and the shore should be reduced to a minimum. In such a port the personnel of a vessel should remain on board during their stay.

Vessels carrying passengers from any port where quarantinable disease prevails in epidemic form should have a medical officer.

No person suffering from a quarantinable disease, or scarlet fever, measles, diphtheria, or other communicable disease, should be allowed to board.

All baggage of steerage passengers destined for the Unites States should be labeled. If the baggage is in good sanitary condition, the label shall be a red label bearing the name of the port, the steamship on which the baggage is to be carried, the word "passed" in large type, the date of inspection and the seal or stamp of the consular or medical officer of the United States. All baggage that has been disinfected shall bear a yellow label, upon which shall be printed the name of the port, the steamship upon which the baggage is to be carried, the word "disinfected" in large type, the date of disinfection, and the seal or stamp of the consular or medical officer of the United States. It is understood, and it will be so printed on the blank, that the label is not valid unless bearing the consular or medical officer's stamp or seal.

Each steerage passenger shall be furnished with an inspection card.

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This card, stamped by the consular or medical officer, is to be issued to every member of a family as well as to the head thereof.

Passengers and crews, merchandise, and baggage, prior to shipment at a non-infected port but coming from an infected locality should be subject to the same restrictions as are imposed at an infected port.

SPECIAL REGULATIONS ON ACCOUNT OF CHOLERA, FOREIGN AND INSULAR

At ports where cholera prevails, special care should be taken to prevent the water and the food supply from being infected. The drinking water, unless of known purity, should be boiled, and the food thoroughly cooked and protected against contamination by flies, etc.

The latrines of vessels must be so arranged that they, including their discharge pipes, can be made and kept mechanically clean. Unless unavoidable, vessels should not take water ballast from a source contaminated or suspected of contamination by cholera. When unavoidable, the facts will be noted on the bill of health.

Certain food products, viz., unsalted meats, sausages, dressed poultry, fresh butter, fresh milk (unsterilized), fresh cheese, coming from cholera-infected localities or through such localities, if exposed to infection therein, should not be shipped. Fresh fruits and vegetables, from districts where cholera prevails, shall be shipped only under such sanitary supervision as will enable the inspector to certify that they have not been expseed to infection. Steerage passengers and crew coming from cholera-infected districts should be detained five days in suitable houses or barracks located where there is no danger of infection, and all baggage inspected and if necessary disinfected. Steerage passengers and crew from districts not infected with cholera, shipping at a port infected with cholera, unless passed through without danger of infection and no communication allowed between such persons and the infected locality, and especially no foodstuffs allowed to be obtained from the infected locality, should be treated as those in the last sentence. Cabin passengers coming from cholera-infected districts embarking at a clean or an infected port should produce satisfactory evidence as to their exact place of abode during the five days immediately preceding embarkation. And if it appears that they or their baggage have been exposed to infection the baggage should be disinfected and the passengers detained under medical supervision a sufficient time to cover the period of incubation since last exposure.

Should cholera appear in the barracks or houses in which passengers are undergoing detention, no passenger from said houses or barracks who has been presumably exposed to this new infection should embark until after the expiration of the period of incubation of the disease in question subsequent to the last exposure to infection and the application of all necessary sanitary measures.

SPECIAL REGULATIONS ON ACCOUNT OF YELLOW FEVER, FOREIGN AND INSULAR

It is advisable that at ports where yellow fever prevails, precautions should be taken to prevent the introduction of mosquitoes (stegomyia) on

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board the vessel. Water tanks, water buckets, and other collections of water about the vessel should be guarded in such a manner that they shall not become breeding places for mosquitoes. Where the vessel has lain in such proximity to the shore at such places as to render it liable, in the opinion of the inspecting officer, to the access of mosquitoes, measures should be taken to destroy mosquitoes that may have come on board.

Passengers and crew who, in the opinion of the inspecting officer, have been definitely exposed to the infection of yellow fever (*i.e.*, as from a house or locality known to have been infected) should not be allowed to embark for six days after said exposure. Those immune to yellow fever are exempt from this provision.

SPECIAL REGULATIONS ON ACCOUNT OF PLAGUE, FOREIGN AND INSULAR

At ports or places where plague prevails in men or rodents every precaution should be taken to prevent rats, fleas, or other vermin from getting aboard. At such ports or places the vessel should not lie at a dock or tie to the shore or anchor at any place where rats may gain access to the vessels. Lighters should not harbor rats, and the introduction of rats from them should be very carefully guarded against. In case lines are led to the shore they should be freshly tarred and provided with inverted cones or such other devices as may prevent rats passing to the ship.

If the vessel docks, the lines should be treated as directed in the last paragraph, and all parts of the vessel fumigated simultaneously, if possible, for the purpose of killing rats and other vermin, before sailing.

Vessels arriving at a foreign port in transit, having previously lain in a plague-infected port without taking proper precautions to prevent the ingress of rats and fleas, should be fumigated to kill such vermin, provided effective fumigation for killing such vermin has not already been done, and that this fumigation can be done effectively.

Articles which harbor or are liable to harbor rats or rat fleas should not be shipped until freed of such vermin, either by the use of chemicals, fumigation, or solutions, or by preventing the access of rats for fifteen days before shipment. The nature of the merchandise and the place and method of stowing prior to shipment must be considered in determining its liability to be a rat or vermin carrier, thus: bundles of hides, bags of grain, etc., so stowed as to be used as nesting places for rats would be flea, and might be rat carriers.

When the cargo of a vessel consists of grain or other rat food, extra precautions should be taken to prevent rats from going aboard.

Hides chemically cured are not liable to harbor rats or rat fleas; and loose single hides are less liable to do so than when baled.

Passengers and crew, who, in the opinion of the inspecting officer, have been definitely exposed to the infection of plague (*i.e.*, as from a house or locality known to be infected), should not be allowed to embark for seven days after said exposure, unless already immune to plague by recent

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previous attacks, or prophylactic serum. All baggage from such ports shall be subject to inspection, and if necessary disinfected and treated to destroy vermin.

SPECIAL REGULATIONS ON ACCOUNT OF SMALLPOX, FOREIGN AND INSULAR

Steerage passengers and crew coming from districts where smallpox prevails in epidemic form, or who have been exposed to smallpox, should be vaccinated before embarkation, unless they show satisfactory evidence of having acquired immunity to smallpox by a previous attack, or successful vaccination within one year, and their baggage inspected and if necessary disinfected.

SPECIAL REGULATIONS ON ACCOUNT OF TYPHUS FEVER, FOREIGN AND INSULAR

Steerage passengers and crew, who, in the opinion of the inspecting officer, have been exposed to the infection of typhus fever, should not be allowed to embark for a period of at least twelve days after such exposure and until their baggage has been disinfected and the destruction of vermin assured.

SPECIAL REGULATIONS ON ACCOUNT OF LEPROSY, FOREIGN AND INSULAR

No alien who is a leper should be allowed to embark for the United States.

RECORDS, REPORTS, ETC., FOREIGN AND INSULAR

The officer making the inspection will preserve in his office a record of each inspection made and of each immunity certificate given, a copy of each certificate of disinfection and of each bill of health issued. A weekly report of the transactions of his office shall be forwarded to the Surgeon General of the Public Health Service, at Washington, D.C.

In addition to the duties prescribed, the medical officer when detailed in accordance with the Act of Congress approved February 15, 1893, shall furnish such reports to the Surgeon General of the Public Health Service as he may be able to make upon sanitary conditions and other matters affecting the public health, and the welfare of the service administration.

The following supplementary Quarantine Regulations were put in force in the Canal Zone, Isthmus of Panama. The chief characteristics which warrant their commendation are their simplicity, paucity and effectiveness. They are highly adaptable to ports held by the military in time of war and subject to martial law.

LAWS OF THE CANAL ZONE, QUARANTINE REGULATIONS

ACT No. 10

An act to provide maritime quarantine regulations for the ports of the Canal Zone, Isthmus of Panama.

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By authority of the President of the United States, be it enacted by the Isthmian Canal Commission:

SECTION 1.—The Maritime Quarantine Regulations for the ports and harbors of the Canal Zone, Isthmus of Panama, shall be as follows:

SECTION 2.—Vessels entering the port or harbor at Ancon or Cristobal from any foreign port where there is a United States Consular Officer must present to the Quarantine Officer of the port and to the Customs Officer of the port, or his authorized deputy, each a bill of health of the same character and form as is required of vessels entering the ports of the United States from said foreign ports.

Vessels entering the port or harbor at Ancon or Cristobal from any port of the United States must present to the Quarantine Officer and to the Customs Officer of the port, or his authorized deputy, each a bill of health, signed by the Customs Officer of said port of the United States from which the said vessel sailed.

SECTION 3.—Such vessels having entered or called at intermediate ports must also present to each of the port officers named in section 2 a supplemental bill of health of the same character and form as is required of vessels entering the ports of the United States from foreign ports.

SECTION 4.—Any vessel entering the port or harbor of Ancon or Cristobal without such bill of health or supplemental bill shall forfeit to the Government of the Canal Zone not more than ($500.00) five hundred dollars, the amount to be determined by the court, which shall be a lien on said vessel, to be recovered by proceedings in the proper court of the Canal Zone.

SECTION 5.—Vessels arriving at any of the ports herein named, under the following conditions, shall be inspected by the Quarantine Officer of the port prior to entry:

(*a*) All vessels from foreign ports.

(*b*) All vessels with sickness aboard.

(*c*) Vessels from domestic ports where any quarantine disease prevails.

(*d*) Vessels from domestic ports carrying passengers or articles suspected by the Quarantine Officer as being capable of conveying the infection of a transmissible disease.

SECTION 6.—The limits of anchorage of vessels awaiting inspection and for vessels undergoing quarantine shall be fixed from time to time for each port of the Chief Quarantine Officer, and this may be different for vessels of different sanitary conditions, or from vessels from ports of different sanitary conditions.

SECTION 7.—Every vessel subject to quarantine inspection shall be considered in quarantine until granted free pratique, and such vessels shall fly a yellow flag from the foremost head from sunrise to sunset, and shall observe all the other requirements of vessels actually quarantined.

SECTION 8.—The captain or master of a vessel in quarantine shall allow no communication with his vessel, except as provided for in these regula-

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tions, under penalty of the law; nor shall any water craft approach such vessel within two hundred (200) meters under penalty of the law.

SECTION 9.—No person or thing shall be allowed to leave the vessel in quarantine without written permission from the Quarantine Officer.

SECTION 10.—Towboats, or any vessel or boat having had communication with a vessel in quarantine, shall, with their personnel, be submitted to such measures of sanitation as the Quarantine Officer may judge to be necessary.

SECTION 11.—No person, except such officers of the port as are required to do so by the nature of their duties, and the agent of the vessel, if he has the consent of the Quarantine Officer, shall go aboard any vessel subject to quarantine until she has been granted free pratique. Any person going aboard prior to the issuance of free pratique shall be subject to the same restrictions as the personnel of the vessel, if, in the opinion of the Quarantine Officer, this is necessary for the protection of the public health.

SECTION 12.—The Quarantine Officer, after the inspection of a vessel and her documents, shall decide whether such vessel is liable to convey through herself, her personnel, or any articles aboard, any of the following diseases: Plague, yellow fever, cholera, smallpox, typhus fever, beri-beri, or leprosy. If so, she shall be placed in quarantine and forbidden entry until free from such liability; and he shall determine what sanitary measures, whether with regard to the vessel, her cargo, or her personnel, are required to enable him to do so. In making these decisions he will be guided by the regulations of the United States so far as they may be applicable to the conditions at his port and as modified from time to time by the regulations of the Isthmian Canal Commission.

SECTION 13.—Passengers aboard vessels subject to inspection will be required, at the discretion of the Quarantine Officer, and on notice given, to present personal certificates from a designated officer at the port of embarkation, certifying to their sanitary history and conditions.

SECTION 14.—Every case of sickness aboard any vessel in the harbor shall be immediately reported to the Quarantine Officer, who shall direct the sanitary measures to be taken therewith.

SECTION 15.—The Chief Quarantine Officer shall also have direct charge of the sanitation of the harbors and vessels lying therein, and shall see that such measures are enforced as are necessary for the proper hygiene of vessels, their cargoes, and their personnel, whether in port or en route, and to prevent the vessels from being a source of danger to other vessels or to the port. He is authorized to certify bills of health to vessels clearing for ports under his jurisdiction, setting forth in each place the conditions of the port, vessel, cargo, passengers and crew; and he is authorized, at the request of any vessel, to disinfect said vessel and otherwise place her in such sanitary condition that she may leave the port in free pratique and be able to make entry at her port or destination without further disinfection or detention in quarantine.

SECTION 16.—The Quarantine Officer shall make such charges for the

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disinfection of vessels and their cargoes, and for the transportation and subsistence of passengers as may be fixed by the Board of Health of the Government of the Canal Zone.

SECTION 17.—The Chief Quarantine Officer must report all cases of infectious or contagious disease found by him at once to the Chief Sanitary Officer of the Isthmian Canal Commission.

SECTION 18.—The certificate of the Quarantine Officer that the vessel has complied with all the Quarantine Regulations of the Isthmian Canal Commission shall be required of every vessel requiring inspection as a prerequisite for customs entry.

SECTION 19.—Any violations of the above regulations, for which penalty has not otherwise been provided, shall be a misdemeanor, and any person or persons guilty of such violation shall, when convicted thereof, be fined in any sum not exceeding twenty-five dollars ($25.00) or imprisonment not exceeding thirty days, or both, at the discretion of the court.

SECTION 20.—Any court of the Canal Zone having jurisdiction in cases of misdemeanor under laws of the Canal Zone shall have jurisdiction of cases of misdemeanor arising under this Act.

These were later supplemented by the following regulations:

The inspection and other prerequisites for issuing the bills and supplemental bills of health shall be the same as are required in the case of vessels bound for United States ports.

Vessels arriving at the ports of Ancon and Cristobal in the Canal Zone or the ports of Colon and Panama, Republic of Panama, under the following conditions shall be inspected by the quarantine officer of the port prior to entry.

(*a*) All vessels from foreign ports.

(*b*) Any vessels with sickness on board.

(*c*) Vessels from domestic ports where any quarantinable disease prevails.

(*d*) Vessels from domestic ports carrying passengers or articles from foreign ports suspected by the quarantine officer of being capable of conveying the infection of a transmissible disease.

The chief quarantine officer is charged with the conduct of Maritime Quarantine and shall issue such orders as may be necessary to carry out these regulations.

The failure of masters of vessels to procure bills of health as specified will in itself be regarded a suspicious circumstance, and may result in delay to the entry of the vessel.

The following are declared quarantinable diseases: Plague, cholera, yellow fever, smallpox, typhus fever, beri-beri, and leprosy.

Immigration of the following was prohibited: Insane people, dangerous maniacs, idiots, professional beggars, anarchists, criminals, individuals of known bad character, phthisics, lepers, epileptics and those suffering from repugnant and contagious diseases.

The Health Officer of the port of arrival made a careful examination

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of immigrants and reported to the Chief of Customs the cases included in the above enumeration.

Any persons found to be included in the classes above mentioned were deported by the steamship company which brought them to the Isthmus.

If such persons had been brought into the country clandestinely, a fine of from $200 to $800 dollars, Panama silver, was imposed for each individual introduced.

These fines were turned in to the National Treasury.

A further ordnance read as follows:

Every person entering the Canal Zone by sea, to reside in said Zone, shall, prior to such entry, present satisfactory evidence of protection against smallpox, either by previous attack, by vaccination, or be vaccinated.

The foregoing regulations were printed in pamphlet form and distributed among those interested.

An occasion requires, *e.g.*, when an epidemic exists at some port of call for a visiting steamship line, regulations are modified from time to time.

It is necessary that the requirements made by dependencies, *e.g.*, colonies, conform to those of the parent country.

When patients arrive from an infected port their temperatures are taken. A temperature of 99.6°F. is considered suspicious and the patient is usually held. Whether he is passed or not depends in a degree upon the place from which he came, the disease suspected, the patient's appearance, age, condition of nutrition, etc. All patients with a temperature of 100° or over are held. When patients are held a fee is collected from the steamship companies for their subsistence. This fee is usually $2.00 a day for each cabin passenger and 50 cents per day for each steerage passenger. There is kept at the quarantine office a register of patients deported. This gives such information as the following: name, age, sex, race, steamship on which party arrived, date of arrival, date of deportation and reason for same. Files of passenger lists are also kept in the office. At the detention camp there is kept a record of patients admitted. This record contains the same information as that kept at the quarantine office, except that the columns pertaining to deportation are replaced by date of discharge and remarks.

In the column of remarks is entered the daily temperature record, the disease suspected, and a statement as to whether this or any other disease developed. The stools of all patients coming from cholera-infected ports, are examined for the spirochætæ.

There is rendered by the Quarantine Officer of a port to the Chief Quarantine Officer a weekly report of vessels arriving at, departing from, or remaining at his port. Hereon are entered the name of each such vessel, date of its arrival, where from, destination, cargo, condition of vessel, condition of cargo, number and sanitary condition of crew, number and sanitary condition of passengers, disease—number of cases, number of deaths, treatment of vessels and cargo at quarantine, date of departure

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from quarantine and remarks. A consolidated report such as the following is also forwarded:

QUARANTINE TRANSACTIONS AT COLON DURING SEPTEMBER, 1916

Number of vessels inspected and passed	78
Number of vessels fumigated prior to departure	3
Number of pieces of baggage handled and stored	714
Number of crew inspected	5,690
Number of passengers inspected	4,943
Total number of persons inspected	10,633
Number of persons vaccinated in port on arrival	1,182
Number of persons vaccinated in port of departure or en route	1,412
Number of persons detained in quarantine to complete period of incubation of yellow fever and bubonic plague	305
Number of persons detained in quarantine to determine if cholera bacillus carriers	113

The method employed for the examination of suspected cholera carriers includes the administration to the immigrant of a saline purge; the inoculation of a peptone tube with a specimen of stool; the incubation of this tube for six hours; the examination of smears made from the surface culture of the peptone tube, which smears are stained with carbol-fuchsin. If curved organisms are found, subcultures in peptone and plates are made on ordinary nutrient agar neutral to phenolphthalein; colonies which have the characteristics of cholera colonies are next examined with reference to the quantitative agglutinating power of a specific cholera serum. Working with this method, ten bacteriologists examined 1000 specimens in one day and the complete examination of 1200 stools was concluded within forty-eight hours. The immigrants from infected districts had been examined bacteriologically before leaving them so that the chances of finding carriers were small. Quite a number of vibrios were isolated, but none agglutinated with cholera serum, although some were morphologically indistinguishable from true cholera vibrios.

Quarantinable diseases are much more common among steerage than cabin passengers and more common among second cabin than first cabin passengers.

The following books are of interest to those engaged in quarantine service:

"Prevention of Infectious Diseases," by Alvah H. Doty, D. Appleton & Co. New York, Publishers, 1911.

"Sources and Modes of Infection," by Charles V. Chapin, John Wiley and Sons, Publishers, New York, 1910.

"Quarantine Procedure," L. E. Cofer, Public Health Bulletin No. 64.

"Maritime Quarantine," L.E. Cofer, Public Health Bulletin No. 34.

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CHAPTER XVII

MEDICAL SUPPLY DEPOTS

The following is chiefly a portion of an article on the Duties of Medical Supply Officers and Their Methods by Colonel H. I. Raymond and Major Edwin P. Wolfe which appeared in the Military Surgeon, Vol. XXXIX, Nos. 1 to 4, inclusive.

A few notes are appended, obtained from the base depots in San Francisco, New York and Washington and the field depot near San Antonio in 1911.

PERMANENT DEPOTS OF SUPPLY OF THE MEDICAL DEPARTMENT

Personnel

The personnel of a permanent supply depot consists of one or more commissioned medical officers and of civil service employees. In the Philippines, enlisted men are employed. The designation or title of the senior medical officer is "In charge" and he is detailed as disbursing as well as supply officer for the Medical Department. He is directly responsible to the Surgeon General and operates, as it were an independent unit under the orders and instructions of his Chief. These depots are exempted from control of Department Commanders; except that the Department Commander concerned will make inspections at least once a year, limited to matters pertaining strictly to discipline, sanitation, etc., and not extending to matters pertaining strictly to the technical administration of depots of supply. However, when an emergency demands, men and material come under the supervision of Department Commanders.

All men employed at the depot are civilians, selected subject to the approval of the Surgeon General and the Secretary of War from lists furnished by the Civil Service Commission.

Following is a schedule of the several functions of commissioned medical officers and civil service employees appropriate for a permanent establishment.

Organization and Duties of Depot Force

A. Officer in Charge.—An officer of field rank with previous experience in supply work.

Duties

1. In general charge.
2. Charge of personnel, semi-annual ratings, etc.

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3. Charge of correspondence, signs all papers requiring autograph signature.

4. Charge of disbursements and money accountability.

5. Property accountability.

6. Personal relations with dealers.

B. Assistant.—A captain of not less than seven years' service, not under thirty-five years of age, with previous experience in care and handling of property, familiar with the needs of the service and the suitability and durability of supplies in use, above the average in mechanical ability, initiative, perseverance and good judgment; a man enthusiastic, but withal conservative in his decisions and willing to work.

DUTIES

1. General charge of property; assigns floor space for the different supplies requiring storage.

2. Inspection of all supplies received, determination of quality of deliveries and recommendation as to awards.

3. Improvements in standard samples, specifications thereof, etc.

4. Investigating, devising and perfecting tests to determine the quality, durability and desirability of materials and supplies.

5. Takes account of stock whenever necessary, investigates shortages, etc.

C. Chemist.—A man well versed in organic, inorganic, industrial and physiological chemistry, and of undoubted integrity.

DUTIES

1. Chemical analysis of all drugs and such other supplies as require it.

2. Preparation of specifications relative to drugs and chemicals for which there are no United States Pharmacopœia requirements.

3. Experimental investigations looking to the improvement of standards.

D. Chief Clerk.—A man of good executive ability, strong character and a good clerk.

DUTIES

1. In charge of personnel.

2. Immediate charge of correspondence, purchases and issues.

3. Preparation and issuing of circular proposals.

4. Exhibiting samples and explaining requirements to prospective bidders.

5. Opening of bids and abstracting of proposals.

6. Preparation of estimates for supplies required.

7. Supervision of awards on informal quotations.

E. Disbursing Department.—One clerk.

DUTIES

1. Prepares vouchers for all supplies purchased.

2. Prepares checks in payment of vouchers.

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3. Prepares monthly abstracts of disbursements.
4. Prepares money accounts for transmittal to Surgeon General.

F. Purchasing Department.—One clerk, assisted when necessary.

DUTIES

1. Obtains quotations, verbal or written, from dealers for all articles not purchased on circular proposal.
2. Prepares ordinary circular proposals.
3. Writes orders for supplies.
4. Records order numbers and dates on special requisitions or transfer sheets.
5. Assists in opening bids and abstracting proposals.

G. Receiving Department.—One clerk and such laborers as may be required.

DUTIES

1. Receives copies of all orders issued.
2. Checks supplies received against bills and orders.
3. Sends supplies to inspecting officer for examination.
4. Sees that date of receipt is stenciled on packages as received
5. Sends small articles ordered on special requisitions to inspecting officer or issuing department.
6. Enters on all bills the date of receipt of the articles noted thereon.
7. Keeps a record of all supplies received, whether by purchase or transfer from other officers.

H. Issuing or Packing Department.—One chief packer and such numbers of packers as the needs of the depot may require.

DUTIES

1. Issues such articles as are in stock and notes on requisitions such articles as are not in stock.
2. In filling requisitions, the chief packer calls off the names of the articles required with the quantities and a packer takes them from the shelf and places them on the packing table.
3. In packing the various boxes and containers, the packer estimates the articles he can pack in a given box and calls them off to the chief packer, who gives the box a number and enters on his packer's list the articles called off by the packer and included in that particular box. After the box is packed, the weight is marked on it in pencil and it is sent to the shipping department, where it is marked with the weight and proper number and the name and address of the consignee.
4. Sends completed requisitions to invoicing department for such action as the state of the stock on hand may indicate.
5. Makes requisition on storekeeper or stock clerk for such supplies as he needs. If a whole box is to be shipped, it is sent direct to the shipping

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department to be weighed and marked. If a whole box is not required to fill the requisition, the box is brought to the issuing room and its contents placed on the shelf. Such quantities as are required are taken from the shelf and packed as needed.

6. Re-packs in containers suitable for stock or shipment such supplies as are received in trade containers too large to handle under Government requirements.

I. Shipping Department.—Storekeeper or stock clerk and such number of laborers as may be necessary to mark and handle shipments. There is only one force of laborers to handle both the incoming and outgoing supplies.

DUTIES

1. Mark boxes, etc., for shipment with weight, number and destination.
2. Assemble all packages for every separate shipment.
3. Check up packages as they are being loaded on trucks.
4. Get drayage receipt for packages delivered.
5. Crate such supplies as require it.

J. Invoice Department.—One clerk.

DUTIES

1. Prepares invoices for all supplies transferred to other officers.
2. Numbers and records requisitions with date of receipt. Requisition number should be entered on all invoices and on orders for special articles purchased to fill the requisition.
3. Prepares "transfer sheets;" that is, sheets showing the articles still remaining unissued on any requisition after the first shipment thereon has been made. As soon as these are made out, the requisition should be filed under its proper number. This is done to avoid loss or damage to the original requisition.

L. Returns Department.—One clerk.

DUTIES

1. Transfers all items from the old return to a new one at the beginning of every quarter, or such other period as the Surgeon General may direct.
2. Enters on the return the invoices as they go out, every item under its proper heading. Invoices are numbered from one up for the period for which return is rendered.
3. Files retained copies of invoices in serial number.
4. Compares receipts with invoices and files them with their invoices.
5. Notifies the chief clerk when receipts are overdue, so that letters may be written to the receiving officers as to the cause of the delay in receipting for the property.
6. Balances and prepares return for signature of the officer in charge and for transmittal to the Surgeon General at the end of the period for which the return is rendered.

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(7. Each invoice should bear the requisition number to which it pertains.)

M. Correspondence.—One clerk.

DUTIES

1. Indexes on card index system all communications received of which it is desired to keep a record, letters, information slips, etc.

2. Makes such appropriate cross references as will enable the ready identification and location of any piece of correspondence.

3. Files all correspondence according to the predetermined system.

4. Removes correspondence from files when called for, replacing it with a slip showing where it is and who is responsible for it. Returns it to its proper place in the file when it is received back.

5. Is responsible for the proper care and order of the correspondence file.

N. Miscellaneous.

1. Such number of additional clerks, some of whom are stenographers, as the size of the depot and the volume of business may demand. All clerks should be able to use the typewriter readily and well.

2. An engineer, in charge of heating, lighting, plumbing, and elevators.

3. A carpenter, for such repairs as can be made at the depot, and for making crates, boxes, counters, etc.

4. An instrument maker and repairer, for repairing surgical instruments and appliances, electrical apparatus, etc.

5. A messenger, for such duties as may be required of him.

This outline of organization is intended for the larger depots. In the other depots where a smaller volume of business is done, consolidations of departments must be made to meet the requirements and to avoid a top-heavy or unnecessary force. It must be left to the judgment of the officer in charge as to how many and in what manner these departments shall be consolidated.

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Part III of the Manual for the Medical Department 1916 gives the Supply Tables, in which the names of expendable articles are printed in Roman type and non-expendable in Italics. By reference it will be seen that the three grand subdivisions appertain respectively to Post Supplies, Dental Supply and Field Supply.

Under Post Supplies are: (*a*) medicines, antiseptics and disinfectants; (*b*) stationery; (*c*) miscellaneous supplies; (*d*) laboratory supplies; (*e*) identification supplies; (*f*) X-ray supplies.

The Dental Supply includes both portable and base outfits.

The Field Supply pertains to Field, Evacuation and Base Hospitals and to the Reserve Medical Supply; to General Equipment for the Ambulance Company; to Dressing Station Equipment; to Regimental Hospital and Infirmary; to Outfit for Field Laboratory; to Transport Column Equipment;

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to Equipment for Hospital Ships and Trains; to Office Equipment for Chief Surgeons in the Field; to Detached Service Chests; to Field Mess Outfit; to First-aid Packets, Tent Units of Bedding, Clothing and Furniture, etc.

The following is a list of Blank Forms required for use at a medical supply depot, and of the records required to be kept.

BLANK FORMS USED AT A PERMANENT MEDICAL SUPPLY DEPOT

Medical Department

Form 12.—Invoice of articles purchased.
Form 17.—Return of medical property, front, card.
Form 17*a*.—Return of medical property, original.
Form 17*b*.—Return of medical property, retain.
Form 17*c*.—Return of medical property, back, card.
Form 18.—List of medical property expended.
Form 19.—Invoice of or receipt for medical property delivered to Quartermaster's Department for transportation.
Form 23.—Invoice of or receipt for medical supplies, post.
Form 24.—Invoice of or receipt for medical supplies, field.
Form 26.—Receipt for medical supplies, post.
Form 27.—Receipt for medical supplies, field.
Form 28.—Invoice of or receipt for medical supplies, single sheet.
Form 31.—Invoice of or receipt for dental supplies.
Form 32.—Packer's list.
Form 33.—Requisition for post medical supplies, annual.
Form 35.—Requisition for post medical supplies, field medical supplies, or dental supplies, special.
Form 36.—Requisition for dental supplies, annual.
Form 38.—Circular advertisement and proposal for supplies.
Form 40.—Abstract of proposals.
Form 41.—Contract for medical supplies.

War Department

Form 14.—Report of open-market purchases.
Form 320.—Account current.
Form 320*b*.—Account current.
Form 322.—Abstract of funds received from authorized sales of public property.
Form 322*a*.—Abstract of funds received from sales of medicines to civilians.
Form 325.—Account of sales of public property at public auction or on sealed proposals.
Form 326. } Invoice of and
Form 327. } Cash receipt for funds transferred.
Form 329*b*.—Abstract of disbursements.
Form 330.—Public voucher, purchases and services other than personal.
Form 330*b*.—Public voucher, purchases and services other than personal, extra sheet.
Form 330*a*.—Public voucher, purchases and services other than personal, long.
Form 330*c*.—Public voucher, purchases and services other than personal, folded.
Form 334.—Payroll.
Form 334*a*.—Payroll, extra sheet.
Form 335.—Public voucher, personal services.
Form 365.—Receipt for cash payment.

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INSPECTOR GENERAL'S DEPARTMENT

Form 1.—Inventory and inspection report.

ADJUTANT GENERAL'S DEPARTMENT

Form 196.—Report of survey.

RECORDS REQUIRED TO BE KEPT AT MEDICAL SUPPLY DEPOTS, WITH THEIR PURPOSE

Cash Book.—Shows receipts and disbursements of funds.

Check Book.—Shows checks issued and state of disbursing account with the Treasurer, United States.

Correspondence.—This is kept by a card index system, consisting of a "Record card file," a "Card index file" and a "Document file."

Employees' Book.—Contains names and addresses of civilian employees.

Order Book.—Contains records of all orders given dealers for supplies.

Requisition Book.—Contains list of requisitions received from posts, transports, etc., for supplies.

Requisition Card Index.—Record of requisitions and estimates to the Surgeon General for depot supplies.

Property Returns.—

Quarterly.—Shows stock of articles on hand for issue at beginning of quarter, and receipts and issues during the quarter.

Annual.—Shows articles in use at depot on hand at beginning of year and additions thereto or transfers therefrom during the year.

Invoice Books.—

Quarterly.—List of invoices of all property taken up on the quarterly return received and issued during the quarter.

Annual.—List of invoices of all property carried on annual return received and transferred during the year.

Cost of Supplies Issued Book.—Contains record of cost of supplies issued to each post or transport.

Packer's List Book.—Contains record of contents of all packages issued from the depot.

Invoice Book, Quartermaster.—Contains record of packages in each shipment turned over to the Quartermaster for transportation.

One function of a depot is to store field units and stock for post hospitals.

Stock is replenished (*a*) by transfer from other depots, and (*b*) by purchase.

The transfers are effected semi-annually by means of the consolidated semi-annual estimate blank form.

It is important to note that all the items which appear on the new Supply Tables are borne on this blank form, with the exception of such items as are purchased quarterly—rubber goods, hydrogen peroxide, packing material, etc. The estimate form, when received at the San Francisco depot, has none of its columns filled in. The amounts of the several items of supplies

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required at the San Francisco depot are entered in the proper "required" column, and the amounts on hand of such items in the "on hand" column. The form is then forwarded to the St. Louis depot. The amounts required at the St Louis depot are entered in the proper "required" column. In the "on hand" column are entered the amounts on hand of the items required at both the San Francisco and St. Louis depots. The estimate form is then forwarded to the New York depot. The amounts required at the New York depot are entered in the proper "required" column. In the "on hand" column are entered the amounts on hand of the items required at all three depots. This showing in the "on hand" columns of the St. Louis and New York depots of amounts on hand at these depots of items they do not require, but which are wanted by other depots, is necessary in order that the preliminary transfers may be expedited. The semi-annual supplies will then be purchased by the St. Louis and New York depots on three separate circulars.

Purchases are made (*a*) by contract; (*b*) by written proposal and written acceptance; (*c*) by oral agreement.

Every purchase of supplies in excess of $500 must be based on advertisement and written contract, except emergency purchases consummated by immediate delivery.

The contract blank for supplies is Form 41, Medical Department. It is too comprehensive for insertion here; but one of its provisions that has relation to a very essential duty of the purchasing officer is the examination and inspection of the supplies by means of samples selected at random from lots delivered. Contracts for supplies are entered into only after public notice inviting proposals for same. This public notice may be given by advertisement in the newspapers when time permits and the quality and value of the purchase, in the opinion of the purchasing officer, will justify the expense; or it may be given by circulars sent to principal dealers in the locality where the supplies are desired, and posted in public places. The latter method is used almost exclusively in the Medical Department.

"When Proposals and written Acceptance" is applicable when the amount of supplies bid on does not exceed $500 and delivery immediately follows an award. Filled-in forms for written proposal and written acceptance are presented.

With reference to the binding force of a proposal, it should be observed with great particularity that the signature, thus "J. B. Smith, President, Neldson Drug Co.," is simply the proposal of the individual; but, thus, "Neldson Drug Co., By J. B. Smith, President," is a proposal by a corporation; and, thus, "Smith and Beardsley, By J. B. Smith, Member of Firm," is proposal by a firm.

As provided by Army Regulations, proposals will be opened and read aloud at the time and place appointed for the opening (bidders having the right to be present), and each proposal will then and there be numbered and entered on an abstract.

Notations made on the abstract show to whom awards are made If the bid of a lower bidder is rejected and that of a higher one is accepted, the

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reason for so doing is noted on the abstract. If a less quantity than advertised for is accepted or if all bids are rejected, notations to that effect are made. After bids are awarded and notations of award are made on the abstract, one copy of same with a copy of each proposal received is forwarded to the Surgeon General.

In purchase of medical supplies by oral agreement, delivery immediately follows the agreement. An open-market purchase is one made without advertising. It is authorized in the following cases, as indicated by Army Regulations.

1. In an emergency, as when the public exigencies require immediate delivery and there is no time to advertise by newspapers, posters, or circulars.
2. When it is impossible to secure competition.
3. When proposals have been invited and none have been received.
4. When proposals are above the market price or otherwise unreasonable.
5. When the aggregate amount of supplies to be procured is less than $500.

After the medical supply officer has procured his stock; his next business is "to safeguard and issue it" as authorized and directed by competent authority. The inspector on his annual visit will ask what precautions are taken against theft and fire, and what means are immediately available for extinguishing fire. It will be well, therefore, to see that no unauthorized person has access to the building outside of office hours; that ample hose with water connection is provided on each floor of the warehouse; that fire buckets, hand grenades and fire extinguishers are distributed throughout the building; that the fire extinguishers have been seasonably recharged; that smoking is prohibited within the warehouse; that all used cotton waste and other inflammable waste materials are consigned to a metal receptacle; that the plumber's blow-pipe is operated only in a tin-lined protector; that all inflammable cleaning and varnish-removing materials (for the depot is a repair and work shop) are handled with caution; and that benzine, gasoline and similar explosives are kept only within a closed vault. The inspector will also inquire as to precautions against moth and against the rusting of metals and the mildewing of fabrics from moisture. Warehouses built with cement floors and located near wharves and from which direct sunlight is excluded are very likely to be damp, dark and cold. Where such is the case, especially frequent inspections of metal goods, saddlery, blankets and field tentage become imperative.

The issue of supplies is made on an approved requisition and needs no elaboration. It is the concern of the supply officer to see that the requisitioning officer gets what he wants on approved requisition in the shortest possible time and at a minimum of cost—quality and price considered—under the dictum that the best is usually the cheapest. It expedites matters if the requisition is definite in its terms. A "tube, rubber, for fire extinguisher" is asked for. Tubing for Underwriters' Fire Extinguisher, as usually furnished, is sent. The tubing is returned for exchange, "the threads being

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too large; size required is ¼ inch; the make of fire extinguisher on hand is 'U.S. Fire Ext'g Mfg. Co., N.Y.'" The definition is complete.

On the fifteenth of the month a List of Articles due on Requisitions received prior to the first day thereof, is required by the Surgeon General. This list shows the source from which received, the articles received, and under the head of remarks such entries as "Awaiting instructions from S.G.O.," "Purchased on contract approved,————1917," "Due from M.S.D. etc."

Under remarks, explanations for delay are entered whenever the reason for delay is not apparent. This exerts a stimulating influence upon the medical supply officer, whose aim should be to keep this list down to its possible minimum expansion. To this end successful bidders should be held to promptitude in delivery of goods within the times specified in their proposals and the activity of the depot force be made dependable for timely packing and shipping.

When an approved requisition reaches a medical supply depot, articles in stock are checked off, packed and shipped and the remainder are entered on a list of purchases known as a "Buy Order," from which is prepared the "Circular Advertisement for Supplies;" and then in due course of time come the proposal and acceptance, and delivery of the goods, as heretofore outlined, and this brings us to the last step in the transaction, namely, the payment for supplies.

DISBURSEMENTS

Funds, How Provided

(*a*) By transfer from one officer to another. This occurs when one disbursing officer is relieved and transfers the funds to his credit to his successor. The officer making the transfer will draw his check directing the depositary to place a stated amount to the official credit of the officer named in the check.

(*b*) By funds placed to his credit with the Treasurer of the United States. The disbursing officer makes requisition to the Surgeon General, stating the appropriation from which desired, for approximately sufficient funds to cover his disbursements for two months, and stating in his requisition the amount on hand to his credit at that date. If his requisition is approved by the Surgeon General, the latter forwards a requisition for the amount desired to the Secretary of War, informing the disbursing officer of such action. The disbursing officer is informed of the amount placed to his credit by a receipt from the Treasurer of the United States. A check book is furnished by the Treasury Department upon requisition made on a form prescribed by the Secretary of the Treasury.

Before a disbursing officer can draw a check he must be assigned a Symbol Number. The Secretary of the Treasury has prescribed that "No disbursing officer shall issue a check on the Treasury of the United States without having his numerical symbol printed, stamped, or written in the lower right-hand corner thereof." Each Numerical is composed of five

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digits. The first digit represents a department, the second digit represents a class of officers within that department, and the three remaining digits are used for designating individuals of a particular class. For example, the writer's symbol number as a disbursing officer for the Medical Department under the War Department is 22,029, in which the digit 2 represents the War Department, the second digit 2 the Medical Department and the digits 029 his number as an individual officer of the Medical Department. This number attaches to him as long as he remains in the Service, though his detail as disbursing officer may not be continuous.

The disbursing officer pays accounts against the Medical Department incurred by himself; but accounts incurred by an officer other than himself he pays only when authorized to do so by the Surgeon General. The accounts paid are incurred in the purchase of medical supplies, and no supplies are purchased without the approval of the Surgeon General. Methods of procuring prices are (*a*) advertising for proposals in newspapers or by circulars sent to principal dealers and posted in public places; (*b*) by inquiry among principal dealers.

Money Accountability.—Disbursing officers are required to forward an Account Current, accompanied by abstracts and vouchers, to the Surgeon General, on or before the tenth day of each month. All payments for supplies are made on vouchers (numbered consecutively, beginning with No. 1) to an Abstract of Disbursements, for the period for which the account current to which it pertains is rendered.

Preparation of Accounts for Payment.—Accounts for supplies purchased are paid on vouchers made out in favor of the creditor, giving his address and showing the date of purchase, the quantity and price of each article and the amount. When a purchase is made as the result of a written proposal and a written acceptance the voucher will be accompanied by a copy of the public notice, the accepted bid and a copy of the letter accepting the bid, and will contain a certificate showing that the procurment of the Articles was made in the manner indicated thereon. When a purchase is made in open market by written order, a copy of the order must be attached to the voucher. Vouchers for purchases will show the mode of purchase, using mode of notation on standard forms. Vouchers will be made out in full before being certified by the public creditor. A voucher for payment will have noted thereon the number, date and amount of the check given in payment of same and the depositary upon which drawn. Articles paid for on vouchers are taken up on Medical Department Form 12, Invoice of articles purchased, which is made a voucher to the Property Return on which the articles purchased are carried.

The foregoing is a brief summary of Regulations on disbursements.

A voucher of purchases is always accompanied by the Proposal and Acceptance, when purchase is by written proposal and written acceptance; when by written order a copy of the order must be attached.

Closing Account with the United States Treasury.—When an officer ceases to act as a disbursing officer he should follow explicitly the specific

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directions for closing up his money accounts. Following is a succinct summary of the regulations on the subject. He will prepare a closing statement of his money accounts from date of last inspection. This statement, with a separate list of outstanding checks, he will forward to department headquarters. He will inform the Secretary of the Treasury what checks he has drawn that are still outstanding and unpaid. He will certify to his successor outstanding debts, if any, and transmit a list of same to the Surgeon General. He will assemble his money and property papers and records, the money papers being assembled separately from the property papers. He will then transfer these papers to his successor, taking his receipt therefor. All correspondence relative to the retained papers will be forwarded by the officer concerned directly to the officer in charge of the depot where such papers are stored. A list of outstanding checks will be kept by the officer to whom they pertain and not packed with the retained money or property papers. It is important for the outgoing officer to retain this list, as the total amount of the checks so listed constitutes the balance to his credit with the United States Treasurer. Until these checks are all presented and paid or otherwise disposed of, he will still have a balance with the Treasurer although no longer a disbursing officer. He should compare the monthly Treasury statements which are sent to him with the list of outstanding checks, crossing out from such list all checks which said statements show were presented for payment and paid from month to month. For the disposition of checks outstanding and unpaid for more than three years after they were drawn, regulations provide that upon receipt of his disbursing account for the month of June of each year the disbursing officer shall make a return to the Secretary of the Treasury of all checks drawn by him which have been outstanding and unpaid for three full fiscal years on June 30th of that year. Upon receipt of such return of outstanding checks the amount remaining to the credit of the disbursing officer represented by such outstanding checks is covered into the Treasury, there to stand to the credit of the payees, and so far as the officer who drew the checks is concerned, this status relative to same is exactly as if they had been presented and paid. In other words, instead of the amount to his credit being paid to the payees of such checks it is paid into the Treasury and his account is credited with such payment. This enables a disbursing officer who has been relieved to close his accounts entirely on receipt of the June 30th statement three years after he was relieved. But to close his account he must make report of the outstanding checks, as pointed out above.

So far as the special rules of a depot are concerned they usually are very few in addition to those prescribed in Regulations. Nothing is bought without authority from the Surgeon General's Office and nothing is issued without authority. The depot is responsible to the Surgeon General direct in all matters save discipline. No contract is entered into without approval of the Surgeon General and it does not become operative without his approval. There is one exception to this and that is the local telephone service which does not bear the signature of the Surgeon General. Contracts are made as

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noted on the blank forms provided. Vouchers for articles purchased at the New York Depot do not require the approval of the Surgeon General before payment. They receive administrative examination at the end of each month.

"In the payment of accounts the number of the check, the date of it and the name of the depositary appear on the voucher and the memorandum voucher. The number of the voucher, the appropriation and the character of the supplies or services appear on the check. This connects the two in the Treasury Department where both go in the end. The voucher must also show the authority for the purchase and the mode of purchase, whether under contract or in the open market.

"Everything that comes into the depot is supposed to be examined as to quality either by sample or individually. Sometimes this is not practicable. In the case of books the examination is made by the receiving clerk simply to see that they are stamped and are the edition required. All other goods are examined and bills approved before the bills go to the Disbursing Section.

"Stock articles are stored and issued in original packages so far as practicable. Quantities are verified as far as practicable. All special articles are repacked and are examined and verified at the time they are packed for shipment."

PURCHASES

The law requires that supplies be purchased only after advertisement except in cases of emergency, or when it is impracticable to receive competition. The question of an emergency is determined only by necessity for immediate issue.

If the purchase is to be a large one, lists, in circular form are issued and a period of thirty days from date allowed before the proposals are opened. During this time prospective bidders are expected to examine carefully the standard samples, with a view to furnishing an equally good or identical article. When the proposals are opened, an abstract is made of them, and, with a list of the parties to whom circulars were issued, are sent to the Surgeon General. The Surgeon General awards the contract and instructs the officer in charge of the depot to enter into written agreement for the delivery of the articles. If the award is for a drug or a medicine for which no standard is provided in the U.S. Pharmacopœia the bidder is required to furnish a sample of the article he proposes to deliver, for examination by the chemist, and if it is satisfactory the contract is made. When the articles are delivered, in the case of drugs and medicines, a sample is taken at random and sent to the chemist, for comparison, and if after examination he reports favorably the article is accepted and put in stock. If the report be unfavorable the contractor is required to remove the articles and deliver a new lot. In case of articles other than drugs, the articles delivered are compared by the officer in charge with the standard sample. He determines whether the new articles are equal to the standard.

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If the purchase is a small one, the time allowed before opening the proposals may be only ten days, or even less and the award may be made by the officer in charge. As the goods are to be delivered at once no contract is made but simply an order for the goods as quoted.

These goods must be inspected and accepted by the officer in charge. He must use his own judgment in regard to many articles not on the supply table and for which there is no standard sample. In case of drugs or medicines he is largely influenced by the status and reputation of the firm from which the purchase is made. When the goods are delivered and bill for the same is rendered it is sent to the Receiving Department which enters on it the date and number of the delivery and signs it; the bill then goes to the Record Department which compares it with the order and signs it; from thence it goes to the Disbursing Department which makes the account of it ready for payment.

STORAGE

To store supplies for an army of 100,000 men for six months an area of 55,000 square feet is necessary. This area should be divided into rooms for receiving, storing, packing and shipping, and the necessary offices. The packing room should be fitted with a table large enough to hold all the articles called for on an average requisition, and shelving, closets, drawers, and bins, for a reasonable amount of every article carried in stock, sufficient for daily requirements.

Rooms for storage should be large, well lighted, dry, and their floors well reinforced and shored up. Automatic fire extinguishing apparatus should be installed. Stock should be arranged in alphabetical order according to the classes on the medical supply table, with passages wide enough to admit a truck between the piles of merchandise.

There should be special storerooms for units of standard supplies, *e.g.*, Field Hospitals, etc. They should be provided with proper shelving.

One reliable man is desirable for each room rather than a general storekeeper. This man should receipt for the property in his care.

When received a requisition goes to the Record Department where it is numbered and stamped with date of receipt. It is then returned to the officer in charge, who sends it to the packing department which gets out such articles as are called for and are in stock, has them packed and makes an entry in the packing book of each article thus packed, the quantity of it, in what box it is packed, giving each box a serial number. This department then makes a copy of this list, called the Packer's List (*i.e.*, a list of the packages), and sends these with the requisition to the officer in charge. If some articles called for are not in stock the requisition is then sent to the purchasing department, which then, if it is an emergency, makes out the necessary orders for the goods and instructs the merchants to mark the packages in such a way that they will be easy to identify and returns the requisition to the officer in charge. If it is not an emergency, the purchasing department makes a transfer (*i.e.*, a list of articles still due), gets out the circular

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lett e for proposals and gives the transfer to the officer in charge, who holds it until the goods are delivered to him by the merchants from whom they are purchased. When the goods ordered are delivered the receiving department after entering the list in the Record of Articles Received turns them over with a memorandum bill to the packing Department which now calls on the officer in charge for the requisition. These goods are then packed, the boxes numbered, and the papers sent to the officer in charge, who directs the making out of the transportation invoice. The requisition then goes to the returns department. Three copies of the invoice are made out and numbered, one copy with two blank receipts is forwarded to the receiving officer, *i.e.*, the officer who has requisitioned the articles. This officer when he receives the articles makes out the blank receipts and sends one to the officer in charge of the depot and the other to the Surgeon General, the officer in charge of the depot compares this receipt with the retained copy of an invoice of these goods and sends a copy of this invoice to the Surgeon General's Office, to be filed there, and retains in his own files the third copy of the invoice. The transportation invoice (which gives only the number of packages, their serial number and weight) is sent to the Quartermaster. When the Quartermaster's drags call for the goods, the shipping clerk, having a list of the serial numbers, erases each number, as the box or parcel marked with the number is taken out and when all the packages are gone, signs and dates the list. He then sends it with the truckman's receipt for these packages to the Officer in Charge. The Quartermaster subsequently furnishes a receipt showing the number of packages and the serial number of each package. The whole transaction is completed by the receipt of the receiving officer, and all papers consisting of these pertaining to the requisition, turnover, transportation, and receipt, with one copy of the invoice, are given the same number, and filed with the retained return by the return department.

The desk of the Officer in Charge of the Depot must be a clearing house in order that he be constantly in touch with the business of the Depot.

REPAIR SHOP

There should be a repair shop in each depot, and such articles as can be mended there should be repaired. In default of this, damaged property should be sent to those who make specialty of repairing the kinds of articles sent in for making over. Various mechanics should be employed according to the character and quantity of repair called for.

Great expansion is possible, if this system be understood and the facilities for such expansion, floor space, capable, *i.e.*, accurate clerks and efficient packers be provided. In the period of eight months, from May to December, 1898, the New York Depot, under the able administration of General J. M. Brown, issued 39,749 packages with a gross weight of 3,378,819 pounds. The ability to meet a special emergency is shown by the fact that an order was received at noon on Sunday August 28, 1898, for Field Hos-

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pitals to be shipped to Mantauk Point, L.I., 120 miles away. The delivery of this shipment in 309 packages was effected at 4 P.M., August 30th.

Similar expedition was shown in shipments to the depot at El Paso during the recent concentration along the Border and their distribution thence among the troops. The medical department supply service since 1898 has surpassed all others in accuracy and promptitude.

The amount of labor to effect this distribution is not appreciated nor readily imagined by a person who has not participated in such work personally. As one detail only it may be noted that each package in this last-mentioned shipment was handled six times before being delivered on the ground.

In order that he may furnish the Surgeon General with an estimate of the quantity of the supplies that his depot will be expected to furnish in the coming quarter, the supply officer makes an average of the quantity supplied during the past year. This estimate, it is recognized, however, is only approximate, and may be in error of 10 per cent. In formulating such an estimate the average number of troops in the service during the past year, and those which will be in service during the coming quarter must be considered.

In connection with the New York Depot there is maintained a laboratory wherein is installed apparatus used in determining the quality of articles submitted by bidders. Samples of drugs, however, are forwarded to the Analysist for the Medical Department at Washington. Some of the articles of apparatus in the depot laboratory are a microscope, scales, a device which indicates the tensile strength of materials, a device which indicates the number of threads per inch in woven fabrics, a device which indicates the weight per 500 of a letter paper, a micrometer, etc.

Upon the opening of an Advanced Medical Supply Depot, the Medical Officer in Charge of the same, first assigns his subordinates to their respective duties. These are the reception and verification of supplies sent him, the issuance of supplies, systematic arrangement of his stock, keeping record of his receipts and issues, and formulation of the proper requisitions and returns of medical property.

As a rule all the supplies are received from the Base Medical Supply Depot, but some may come from other points, *e.g.*, local purchases.

Stock must be systematically arranged, and any changes made in its distribution among boxes should be shown, as a packers list, etc.:

No. Shipping package	Contents	Quantity	Weight
1.....3, 3 Bxs.	Hydrargyri chloridum corrosivum tablets, 250 in W.M. bottle, Botts. 30.	Boxes 3	87 each
4.....5, 2 Bxs.	Individual dressing packets No. 300.	Boxes 2	84 each

The record of the receipt and issue of supplies can be kept easily in a small account book. The name of each article received should be written

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across the top of two pages, that face each other, and on the left-hand page should be entered the debits in that article, on the right-hand side the credits, *e.g.:*

	Quinine sulphate 200-mgm. tabs., 1000 in tin			Quinine sulphate 200-mgm. tabs., 1000 in tin	
May 1	From Base Depot, Tins	60	May 6	To issue, F.H. No. 1, Tins	20
May 10	From Base Depot, Tins	40	May 6	To issue, F.H. No. 4, Tins	50
May 19	From Base Depot, Tins	20	May 9	To issue, F.H. No. 2, Tins	30
		120			
May 19	Balance on hand.....	20			100

It is well to supplement this system by keeping an account of the supplies issued each organization. For this purpose one of the blank invoices of medical property can be employed. It is cut so that the printed list of articles can be pasted on the left-hand side of the pages of a book, and the rest of the page ruled in horizontal and vertical columns. When an issue is made to an organization, the date is written in at the head of the first vertical column that is not yet employed and in the same vertical column, opposite the name of an article issued is entered the quantity of it issued, *e.g.*

FIELD HOSPITAL NO 1.

Article	Aug. 1, 1910	Dec. 31, 1910
Quinine sulphate, 200-mgm. tabs. 1000 in tin.....Tins	40	20

The amount of supplies issued to an organization are totaled from time to time. This measure provides a check on the relative expenditure of the several units.

If opportunity permit, in semi-permanent camps some structure should be fitted with ample shelf room, and on these supplies should be arranged in the order in which they are listed in the supply tables.

Replenishment of medical supplies is effected in the manner stated in the Manual of the Medical Department.

Medical Supply Depots on the line of communications make returns, reports, and records similar to those of home depots. In addition they make to the Surgeon, Base group, the daily field reports of sanitary personnel and transportation required by Par. 558, M.M.D.

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CHAPTER XVIII

THE EXAMINATION OF RECRUITS

The physical requirements of recruits are prescribed by G.O. 66, W.D., 1910, Regulations Governing Physical Examinations (Form 11 P.M.G.O.) published July 2, 1917, Memorandum No. 9, Surgeon General's Office, Aug. 25, 1917 and Instructions for the Physical Examination of Drafted Men at National Army Cantonments published by the Surgeon General's Office, 1917.

The following are the Regulations Governing Physical Examinations under the Selective Service Act of May 18, 1917 as modified by Memorandum No. 9, Office Surgeon General, Aug. 25, 1917.

1. It is important, to begin with, that the examining physician should realize that there will be a certain proportion of men among those presenting themselves for examination who will endeavor to obtain exemption by dissimulation, varying from exaggeration of an existing condition not disqualifying to downright malingering, and he should be prepared to protect the Government and himself against such attempts at deception.

2. The physical examination should take place in a large, well-lighted room. The person to be examined is to be stripped. The examining physician should proceed in substantially the following order, viz.:

(a) Observe the general condition of the skin, scalp, and cranium, ears, eyes, nose, mouth, face, neck, and chest. Take weight, height, and chest measurements. Accepted measurements are as follows, all chest measurements to be taken on a level just above the nipple:

Height		Weight, pounds	Chest measurement	
Feet	Inches		At expiration, inches	Mobility, inches
5	61	118	31	2
5	62	120	31	2
5	63	124	31	2
5	64	128	32	2
5	65	130	32	2
5	66	132	32½	2
5	67	134	33	2
5	68	141	33¼	2½
5	69	148	33½	2½
5	70	155	34	2½
5	71	162	34¼	2½
6	72	169	34¾	3
6	73	176	35¼	3
6	74	183	36¼	3
6	75	190	36¾	3¼
6	76	197	37¼	3½
6	77	204	37½	3¾
6	78	211	38¼	4

See Appendix II—493a.

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The following variations below the standard given in the table are permissible, when the applicant is active, has firm muscles, and is evidently vigorous and healthy:

Height, inches	Chest at expiration, inches	Weight, pounds
61 and under 64	1	8
64 and under 68	2	10
68 and under 69	2	12
69 and under 70	2	15
70 and under 73	2	20
73 and upward	2	24

To be acceptable, men below 64 inches in height must be of good physique well developed, and muscular.

Variations in height above the standard are not disqualified, unless sufficient to constitute obesity. Unless exceptionally well proportioned men above 6 feet 6 inches in height should be rejected.

Under Par. 2 (*a*) no departure from the above standard should be made in the matter of height. In the matter of weight, the following additional reductions may be allowed: 61 to 63 inches inclusive, no reduction from present standard; 64 to 67 inches inclusive, 5 to 6 pounds; 67 to 69 inches inclusive, 7 to 8 pounds; 70 to 74 inches inclusive, 9 to 10 pounds; above 75 inches, 12 pounds.

A reduction in chest measurement of ½ inch may be allowed in heights above 68 inches, provided there is no disease of the chest or contained organs.

(*b*) The arms being extended above the head, backs of hands together, the applicant is required to cough vigorously; any form of rupture may now be discovered by the hand and eye, but still better by the index finger passed up to the external ring.

(*c*) The arms remaining extended above the head, the applicant is required to take a long step forward with the right foot and bend the right knee; the genital organs are now conveniently exposed and varicocele and other defects in the scrotum may be recognized.

(*d*) Arms down and the man required to separate the buttocks with his hands at the same time bending forward; this exposes the anus.

(*e*) Examine the heart and lungs; rate of pulse and respiration.

(*f*) Upper extremities: Make sure that all joints are free and supple, from the phalanges to the shoulder.

(*g*) Lower extremities: The person under examination is required to leap directly up, striking the buttocks with the heels, to hop the length of the room on the ball of first one foot and then the other, to make a standing jump as far as possible and repeat it several times, to run the length of the room in double-time several times; after which his heart and lungs are reexamined.

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(*h*) The mental examination should be such as to develop whether or not the man examined is possessed of normal, sound understanding.

(*i*) Vision: To determine the acuity of vision, without glasses, place the person under examination with back to window at a distance of 20 feet from the test types. Examine each eye separately, without glasses, covering the other eye with a card (not with the hand). The applicant is directed to read the test types from the top of the chart and as far down as he can see, and his acuity of vision recorded for each eye, with the distance of 20 feet as the numerator of a fraction, and the size of the type of the lowest line he can read correctly as the denominator. If he reads the 20 feet type correctly, his vision is normal and recorded $^{20}/_{20}$; if he does not read below the 30 feet type, the vision is imperfect and recorded $^{20}/_{30}$; if he reads the 15 feet type, the vision is unusually acute and recorded $^{20}/_{15}$, etc. Men may be accepted for the line of the army when unable with either eye to read correctly all the letters on the twenty-fortieths or twenty-one hundredths line, provided that they are able to read some of the letters on the line below.

(*j*) In accordance with these conclusions, the minimum visual requirements are as follows: $^{20}/_{40}$ for the better eye, and $^{20}/_{100}$ for the poorer eye, provided that no organic disease exists in either eye.

(*k*) Hearing: To determine the acuity of hearing, place the applicant facing away from an assistant who is 20 feet distant and direct him to repeat promptly the words spoken by the assistant. If he cannot hear the words at 20 feet, the assistant should approach foot by foot, using the same voice, until the words are repeated correctly. Examine each ear separately, closing the other ear by pressing the tragus firmly against the meatus. The examiner whose hearing should be normal, faces in the same direction as the candidate and closes one of his own ears in the same way as a control. The assistant should use a low conversational voice (not a whisper), just plainly audible to the examiner, and should use numerals, names of places, or other words or sentences until the condition of the applicants hearing is evident. The acuity of hearing is expressed in a fraction the numerator of which is the distance in feet at which the words are heard by the candidate and the denominator the distance in feet at which the words are heard by the normal ear; $^{20}/_{20}$ records normal hearing, $^{10}/_{20}$ imperfect hearing, etc. If any doubt should exist as to the truthfulness of the answers given, a watch should be used, care being taken that the individual does not know the distance from the ear from which it is being held; the watch used should be one whose ticking strength has been tested by trial on a normal ear. The hearing with both ears open should not be below $^{10}/_{20}$.

3. The following defects are causes for rejection:

Mental.—Lack of normal understanding.

Skin.—Chronic, contagious, and parasitic diseases, when severe and extensive; chronic ulcers, deep or extensive.

Head.—Abrupt depression in skull, the consequence of old fracture.

Spine.—Curvatures, caries, abscess. Lateral curvature is cause for

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rejection when it exceeds 1 inch to either side of the line of spinous processes, especially when it throws the shoulders out of symmetry.

Ears.—Any discharge from the ear. Perforation of tympanum in a dry ear is not disqualifying, provided the hearing is ten-twentieths or better.

Eyes.—Acuity of vision below the requirements of Par. 2 (*j*); conjunctival affections, including trachoma and entropion, strabismus, diseases of the lachrymal apparatus, exophthalmos, ptosis, asthenopia, nystagmus.

The Surgeon General advises that in order to prevent the terrible ravages which result from the introduction into the Army of that dread disease of the eyes known as trachoma, the lids of every recruit be everted to insure the absence of this disease and that any border line or suspicious cases be referred to an ophthalmic surgeon especially qualified in this line.

Mouth, Nose, and Fauces.—Deformities interfering with mastication or speech, chronic ulcerations, fissures or perforations of the hard palate, hypertrophy of the tonsils sufficient to interfere with respiration or phonation, loss of voice or manifest alteration of it. The person must have at least four serviceable molar teeth, two above and two below on one side or two above and two below on the other side, and so opposed as to serve the purpose of mastication. A good fitting bridge or plate where not more than one-half of the teeth are involved is not disqualifying. In the case of defective teeth the following may be allowed: a well-fitting artificial denture (bridge or plate) is allowed to take the place of missing teeth, provided the natural teeth present are sound and serviceable. If dental work will restore the teeth so as to meet requirements of proper mastication, the man should be accepted.

Obstruction of nostrils, or foul discharges indicative of ozena: Simple atrophic rhinitis is readily curable. Nasal polypi often mean chronic sinusitis, but are not a bar to acceptance for military service. Sunken or scarred nose is often indicative of syphilis, while a red bulbous nose suggests alcoholism or indigestion.

Neck.—Pronounced goiter, great enlargement or ulcerations of the cervical glands.

Chest.—Disease of lungs and heart, especially in flat or narrow or malformed chest. In examining the heart care should be taken not to ascribe to disease the hurried, sharply accentuated action sometimes due to nervousness, fright or embarrassment, or the irregular action caused by the excessive use of tobacco. Nor should the examiner attach undue importance to the soft systolic murmurs often heard in growing athletic youths, functional and temporary in their nature.

Abdomen.—Chronic inflammations of the gastrointestinal tract, including chronic diarrhea and dysentery and other diseases of the contained organs; great care should be exercised before exempting for these conditions; hernia in all situations.

Anus.—Hemorrhoids of a pronounced type, prolapsus, fistula and fissures.

Genito-urinary Organs.—Syphilis when discernible by inspection and

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physical examination; tight urethral stricture, undescended testicle, chronic orchitis, marked hydrocele, chronic disease of the bladder and kidneys. Varicocele does not constitute a cause for rejection unless it is so large as to interfere with locomotion; it frequently occurs among the most robust men and often without their being aware of its existence. Gonorrhea, acute and chronic, is not disqualifying, but individuals so affected should be advised immediately to secure appropriate medical treatment pending receipt of orders to report for duty.

Affections Common to Both Extremities.—Chronic rheumatism and diseases of the joints of disabling type, irreducible dislocation or false joints, old dislocations if attended with impairment of motion or distortion of the joint, severe sprains, chronic synovitis, badly united fractures, caries, necrosis, atrophy or paralysis, extensive or adherent scars, permanent contraction of muscles.

Hands.—Webbed fingers, permanent flexion, extension or loss of motion of one or more fingers; loss or serious mutilation of either thumb, total loss of index finger of right hand, total loss of any two fingers of the same hand, or loss of the second and third phalanges of all the fingers of either hand.

Lower Extremities.—Pronounced varicose veins, especially when attended with edema or marks of ulceration, pronounced knock-knees, club feet, flat feet, bunions, over-riding or marked displacement or deformity of any of the toes, hammer-toes.

The shin bone, if rough, nodulated, and tender, suggests syphilis. A broad flat sole is common in laboring classes, particularly among negroes, and is in no way disabling. In the flat foot which renders a man unfit for the service the arch is so far gone that the entire border rests on the ground, with the inner ankle lowered and very prominent and the foot apparently pushed outward. Flat feet are not infrequently the result of tuberculous process.

4. Any of the physical deficiencies mentioned above must be present in such degree as to clearly and unmistakably disqualify the man for military service before he can be found to be physically deficient and not physically qualified for military service.

Attention is particularly invited to the provisions of this paragraph. No drafted men will be rejected by a medical examiner on reexamination at a cantonment unless it has been clearly demonstrated that he is physically or mentally unfitted for military service. In case of doubt the man should be kept in service under proper medical supervision.

5. Temporary effects of acute disease or of an injury are not to be regarded as justifying a finding that the person so affected is physically deficient and not physically qualified for military service, but may be regarded as justifying a reasonable delay in completing the physical examination in order that an opportunity for recovery may be afforded.

6. Upon the recommendation of the Provost Marshal General, medical officers will be directed, from time to time, to visit local boards for the purpose of observing the manner in which physical examinations are being conducted and conclusions based thereon. Such medical officers will be

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authorized to reexamine men whom the local boards have found to be physically deficient and not physically qualified for military service, and will be required to make a report of each such reexamination.

7. These regulations may be modified at any time by the President of the United States.

The visual requirements for service in the Regular U.S. Army are prescribed by Circular No. 26, War Dept., 1909 and G.O. No. 112, War Dept., 1911, which read as follows:

1. For the line of the Army and for the Signal Corps: $^{20}/_{40}$ for the right eye and $^{20}/_{100}$ for the left eye, provided that no organic disease exists in either eye.

(*a*) Recruits may be accepted for the line of the Army when unable with the right eye to read correctly all of the letters on the $^{20}/_{40}$ line, provided that they are able to read some of the letters on the $^{20}/_{30}$ line.

2. For the Ordnance Department and for the Hospital Corps; $^{20}/_{70}$ in each eye, correctible to $^{20}/_{40}$ with glasses, provided that no organic disease exists in either eye.

The following minimum visual requirements for candidates for appointment in the Medical Corps are announced, superseding those prescribed in Par. 9 Manual for the Medical Department, 1906, as amended by Par. 11, General Orders, No. 134, War Department, June 15, 1907, and and Par. 1, General Orders No. 41, War Department, March 27, 1908, are published for the information of all concerned:

(*a*) The visual acuity of each eye without lenses must not fall below $^{20}/_{100}$ as determined by the official test types.

(*b*) With the proper correction by lenses the visual acuity of each eye must not fall below $^{20}/_{30}$. In cases where the acuity of vision without glasses is markedly below normal, the presence of organic disease must be excluded.

(*c*) While using the refractive correction required for distant vision, in the case of ametropic conditions, the applicant must be able to read No. 1 Jaeger (.50 Snellen) at the usual distance for near work (13 to 20 inches) while using both eyes.

(*d*) Strabismus of any type or color blindness for red, green, or violet will be a cause for rejection.

(*e*) The foregoing requirements apply to eyes free from disease, either acute or chronic. All lesions of either fundus oculi, whether old or of recent origin, as determined by ophthalmoscopic examination, will be causes for rejection. A certificate from a competent oculist may be accepted at the option of the examining board as evidence of freedom from lesions of the fundus.

In connection with the foregoing, it is interesting to note the visual requirements in certain foreign armies.

In France, Germany, Austria and Italy, the vision with glasses determines the acceptance or rejection of a recruit; whereas in Great Britain, it is the vision without glasses which counts. The difference is due to the fact

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that up to the commencement of the present war, the British Army was organized largely for foreign service at a great distance from its base, where there might be difficulty in providing properly fitting glasses. In the British Army, the standard for general service requires without correction, vision $\frac{6}{24}$ in the better eye and $\frac{6}{60}$ in the worse eye, which must be the left.

In Germany combatants are required to have corrected vision of at least $\frac{6}{12}$ in one eye, while in the other eye, the corrected vision may be minimal, and in the Landstrum the second eye may be blind. In the armies of Germany, Austria, France and Italy, more than six diopters of myopia are allowed. So far as shooting is concerned, it is generally agreed that vision $\frac{6}{12}$ at least is necessary, and on the continent it is believed that a soldier with $\frac{6}{12}$ vision wearing glasses is more efficient as a combatant than another with $\frac{6}{24}$ vision without glasses. Continental authorities have found that on an average soldiers who see best shoot best, and that those who wear correcting spectacles shoot better than those who do not.

Tests for vision and hearing are given in the Chapter on Malingering. The examination for puimonary tuberculosis is described in Memorandum No. 6 S.G.O., Aug. 23, 1917, that for cardiovascular examination in memorandum No. 7 S.G.O., same date, and in Circular No. 21 S.G.O., July 14, 1917, that for nervous and mental diseases in Memorandum No. 8 S.G.O., Aug. 23, 1917 and the orthopedic examination in Circular No. 23 S.G.O., Aug. 13, 1917.

Memorandum No. 4 S.G.O., Aug. 22, 1917, which prescribes the manner in which examinations under the Selective Sevice Act are to be made reads as follows:

1. The original physical examination of men drafted under the Selective Service Act of May 18, 1917, is made by local boards on Form No. 14, Provost Marshal General's Office, and the original form is forwarded with the man to the mobilization (cantonment) camp.

2. The reëxamination of drafted men, provided in Section 17, Mobilization Regulations (Form 31) should be made under the direction of the Division Surgeon with the least practicable delay after their arrival at the cantonment, as follows:

(*a*) The preliminary examination.

(*b*) The final examination.

3. The **preliminary examination** should be conducted at Regimental Infirmaries (if practicable) by regimental medical officers, and such other medical examiners as may be detailed by proper authority. As a result of this examination medical officers are authorized to accept for service all men who are mentally and physically qualified. All cases recommended for rejection and doubtful cases of every sort will be reported by name to the Division Surgeon for further examination.

4. **The Final Examination.**—At each cantonment specialists have been detailed to conduct the final examination, as follows: Examiners for visual defects and diseases of the eye; for defects of hearing and diseases of the ear, nose, and throat; for diseases of the lungs; for diseases of the heart and

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vascular system; for mental and nervous diseases; for diseases of the bones and joints, including the feet; for dental defects; and for general disqualifying conditions not covered by these specialties.

5. Drafted men whose physical condition has been reported to the Division Surgeon as in doubt, or deserving discharge, at the preliminary examination, will be referred to the medical examiner of the specialty concerned. The special examiner will make such tests and examinations as he may deem necessary. In all cases where there is agreement between the specialists and the regimental surgeon the latter should accept or reject as the case may be; in case of disagreement, the matter should be referred to the Division Surgeon.

6. In addition to the corps of special examiners, the Division Surgeon may appoint from the cantonment personnel such additional medical examiners as may, on account of special training, be particularly competent to determine the qualifications of recruits. These examiners will pass upon general disqualifying conditions not covered by the other specialists.

METHOD OF EXAMINATION

7. The Regimental Surgeon should request the Regimental Commander to furnish daily at 7:00 P.M. a list of the names in full of the men to be examined the following day, together with physical forms (No. 14 P.M.G.O.) in each case. The surgeon will have a recruit examining card (Form 88, Med. Dept. 1917) made for each drafted man from this list, numbering each card numerically beginning with one. This will be done the night before the examination.

8. On the morning of the examination, Company Commanders will have the men report at 6:30 at the Regimental Infirmary and turned over to the Sergeant of the Medical Department designated to receive them. A roll call is made by the Sergeant who should have in his possession the recruit examination cards. Each man is now given his card and proceeds to the room for the examination of the eyes. This is done by two enlisted men of the Medical Department in the presence of a medical officer; the vision of each eye should be tested separately at a distance of 20 feet and the result recorded on the recruit card in the proper place. The recruit is now faced about and his hearing tested at 20 feet by a low conversational voice, testing one ear at a time, the other being closed by pressure on the tragus. The nose, throat and ears are now examined by reflected light. Any deviation from normal is recorded on the recruit card. If the man is found disqualified for any cause, the facts are plainly stated on the card and the case referred to the specialist.

9. Having completed this portion of the examination, the men are taken in lots of 30 and in numerical order to the main examining room. Numbers 1 to 15 are lined up on one side, 16 to 30 on the other. They strip and face the examiner, who has a clerk seated near him with the recruit card of the men to be examined. All the men on one side of the room hop in a circle first on one foot, then on the other, keeping well up on the toes to determine

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strength of feet. The same procedure is repeated on the other side. Note any weakness and if necessary refer to specialist.

10. Upon completion of hopping test, have them line up again and proceed with the general examination as follows: Have each man face the examiner, scrutinize him carefully taking into consideration his general physique and intellectual appearance. If not muscular, well proportioned and healthy looking, refer to the specialist to have weight, height and chest measurements taken for a final decision. Exercise all joints, at the same time asking such questions as may aid in forming an opinion as to his mentality. Begin at top of head, passing hands through hair to detect abnormalities, depressed fractures, adherent scars, etc. Next examine the eyes, pulling down lower lids and inverting upper ones. Open the mouth and carefully scrutinize teeth, look for mucous patches, protrude tongue to note tremor; make Romberg test. Pass hand over front and back of neck, examining for goiter and enlarged glands. Observe clavicle and ribs for any enlargements. Note conformation of chest. Examine heart and lungs with stethoscope. Pass hand over edges of liver, spleen and gall-bladder. Note any abdominal scars and test for ventral hernia. Have applicant stand on toes and cough at same time. Place your finger in inguinal rings and test for hernia. Have the man pull back the foreskin of his penis and observe for ulcers, then strip forward to detect gonorrhea; examine scrotum; observe extremities for atrophy, varicosities, shortening ulcers or adherent scars, especially over shins, edema or thickening of periosteum. Examine feet carefully and note defects.

11. Face applicant about; begin at top of head and proceed down in similar manner. Look for atrophied subscapular muscles, marked winged scapulæ, curvature of spine, Potts' disease, ankylosis of spine. Have applicant bend over and pull buttocks apart; look for hemorrhoids, fistula, condylomata, etc. Observe lower extremities for varicosities, atrophy, etc. Have applicant hold up first one foot and then the other; look for corns, callosities, also note the outline of the dust on the bearing surface of the foot. During the entire examination ask such questions as may aid you in determining the fitness of the applicant. Bear in mind that you are examining drafted men and do not be influenced by subjective symptoms where there are not objective signs to bear out the statements. This completes the physical examination.

12. After the preliminary examination and before the man dresses, he should receive his first inoculation of triple vaccine and the smallpox vaccination. The site of the inoculation should be just above the right posterior axillary fold; this area should be painted with iodine solution prior to inoculation. The insertion of left deltoid should be the site of the smallpox vaccination, which should be well cleansed with soap and water and wiped dry with alcohol. It will require two enlisted men to do this work. The fact of vaccination and inoculation should be noted on recruit examining card at the time. All men, whether accepted or rejected, should receive the vaccination and inoculation.

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13. All cases recommended for rejection at the preliminary examination and all doubtful cases must be referred to a specialist. The recruit examining card will show for what cause the man is referred and the specialist will note his findings and action thereon.

14. The cases to be referred to the specialists together with their recruit examining cards are now sent to the place for special examination.

15. The Regimental Surgeon should furnish to the Regimental Commander daily a list of the men accepted and a list of those recommended for discharge. Notes on the recruit examining cards should be transcribed on the physical forms. Weight, height and chest measurements, will be copied from data on physical forms (No. 14 P.M.G.O.) furnished by the local boards, except in those cases referred to the specialist for retaking of weight, height and chest measurements, in which case the specialist will note his findings in the proper place on the recruit card.

16. The recruit examination card should be retained by the Regimental Surgeon until all immunizations are completed and noted. It should be sent to the Division Surgeon for file.

17. The identification record (Form No. 260, A.G.O.) will be made in accordance with existing regulations. The necessary equipment will be found in the Emergency Recruiting Outfit (Par. 952, M.M.D.). These have been supplied to National Army Cantonments at the rate of one to each 2000 men.

Concerning organization for physical examination Colonel Charles Wilcox writes as follows: "When many men must undergo a physical examination, it is essential that the officer in charge of the examination be on the ground when the men arrive, that he have his personnell organized for and instructed in the work they are to do, and that he have on hand all the equipment necessary for the work. If the personnel and equipment are not ready but have to be obtained later, there must be resulting delay. It is also essential for smooth work that buildings be available. Men can be examined in tents, but the advantage of buildings is so great that if none are available they should be erected quickly; the expense is trifling compared with the gain. The buildings should be large, well lighted, have doors at both ends, a dark room, running water, tables and benches. During the days physical examinations are held, the buildings should be used for no purpose except physical examinations. Later they can be used for other purposes. The organizations to be examined must be reported according to a prearranged schedule that subsequently can be modified if conditions demand. If the men are not organized in companies, troops, etc., they must be organized in groups, each under command of an officer, who will report his men on schedule time and be in charge of their discipline and orderly conduct during the examination, and who will have filled in the first part of the physical forms, having taken care that all entries are carefully and accurately made. These forms and a duplicate list of his men should be brought by him at the appointed time to the place of examination."

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The personnel required for examining, will depend on how many men are to be examined daily. In a mobilization camp the immunization against smallpox and typhoid should be done under the supervision of the Camp Surgeon, either by a personnel detailed especially for the work, or by the medical officers attached to the units. To physically examine, prepare all records for, enlist, make identification records, do the Wassermann test and immunize 100 recruits daily, requires a personnel of three medical officers and sixteen enlisted men. A smaller personnel would result in the work dragging, in men working overtime and going stale. The personnel required for examination at a mobilization camp must be based on a much modified system.

The greater part of this examining work must be performed by Reserve Officers. They should be selected with due care and detailed for the work that their past training best qualifies them. This applies especially to examination of the feet, eyes, ears, nose and throat. If possible a Dental Surgeon should be a member of the force. If one is not available, the teeth form part of the mouth examination. Preliminary to the examination, the officers conducting it should be advised on malingering. Many men in civil practice see little of moral obliquity in their patients and therefore may not suspect it.

Examinations may be conducted by having medical officers examine the entire body or in small groups. The latter is the better way since it permits the selection of examiners for the work for which they are best qualified, and the examination is more consistent and better standardized. No one part of the body is slighted by an examiner laying more stress on another part. By dividing the examination between different men, each man is particularly interested in the part of the body assigned to him, with the result that every part receives the careful consideration due it. An examiner becomes more skilled in his special work as it progresses and no part of the body is neglected. The examining force being assigned its special duties, it is not wise to insist that the work be carried out in the exact manner first contemplated. It may be found that one man works much faster than another, and, as the examination can proceed at no faster gait than the gait of the slowest man, the slowest man will have to be forced to greater speed, or a faster man will have to cover part of his work. It is important for the officer in charge to watch his team carefully, especially in the beginning, to keep every one working at the same rate and get the greatest speed and the best results from all. The team must not be started with inflexible rules, but there must be adjusted until the best working combination is found. In handling the team, if due consideration is given to the temperament of each member, better results will follow. Some men require driving and others careful leading. Showing appreciation of work well done will get more and better results than will an indifferent acceptance of it. Encouragement and appreciation, of the clerks especially, and making them realize their work is an important link in the chain, will add wonderfully to their spirit, and their accuracy. This detail is important.

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A regiment may be examined by one of several systems or by a modification of or combination of several. Whatever method is adopted it is advisable to first examine as many officers of the regiment as possible, to enable them to subsequently oversee the discipline of their units during the examination of the enlisted men. If the examination by companies is to be carried out uninterruptedly, one officer should be with the first company to be examined and, instead of being examined with the officers as a body, should be examined with his company. This will enable the first company to follow without delay the group of officers first examined.

A regiment may be examined (1) by having a number of companies begin the examination at the same time; one company having its men's vision tested, another hearing, another chest, another height, weight and measurements, etc., according to the number of groups into which the examining force is divided; or (2) by having one company report at a time, the others following in order.

Major F. Schmitter, Med. Corps, U.S. Army, who has had much experience in physical examinations, and who is a very rapid examiner states that the first method proved very satisfactory after his force became familiar with the work. He had Company "A" report to one examiner in mess tent "A," Company "B" to another examiner in mess tent "B" and so on to six examiners in all. When a company had been examined in one tent, it was marched to its company street and held until directed to report to another tent. His scheme as he worked it out was ingenious and prevented loss of time, as every examiner worked steadily. A company was always ready for his call when he completed a company. To administer this system, however, requires a guiding hand and a train dispatcher's watchfulness and skill. It also assumes a well-trained team, each group able to work independently. With a good guiding hand, a cool, watchful head to prevent a possible mixup or delay, and a well-trained and practised personnel, the system should prove an excellent one, but the practice of completing the examination of individual companies is that usually followed.

When the examination of one company is carried through uninterruptedly to completion and is followed by the examination of other companies, it will be possible for one group of examiners to examine approximately half a regiment a day; to examine a regiment a day, two groups will be required.

The personnel shown in the following table was proposed by Colonel Wilcox based on the assumption that it is required to thoroughly and carefully examine a regiment a day. At first glance it may appear excessive, but if it is reduced he states it will only result in the examination of less than a regiment, or in a lessening of the care and thoroughness of those examined, if a regiment a day is examined. If this personnel is cut down it will necessitate the medical officers and clerks doing more than the work above assigned. For instance, one medical officer can take the eye, ear, nose, throat and teeth, another the rest of the body, this will give as good results

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as far as quality is concerned, but the output must be greatly reduced, and the entire regiment cannot be examined.

The officer in charge exercises general supervision, decides doubtful cases, requests waivers for defects if he has not been given authority to waive, or if a board has not been appointed to act on these cases, sees that

Administration	Commissioned	Enlisted
1 Medical officer, U.S. Army, in charge	1	
1 Noncommissioned officer, Medical Department, U.S. Army, correspondence and records.		
1 Private, Medical Department, U.S. Army, orderly	.....	2
Examining force:		
Two groups, each as follows:		
Height, weight, chest measurements		
1 Noncommissioned officer to take measurements and weight		
1 Private, clerk		4
Vision and hearing		
1 Medical officer, U.S. Army, or Reserve Corps		
1 Private, assistant	2	
1 Private, clerk		4
Ear, nose and throat		
1 Medical officer, U.S. Army, or Reserve Corps		
1 Private, assistant	2	
1 Private, clerk		4
Teeth		
1 Dental surgeon, U.S. Army, or Reserve Corps		
1 Private, assistant	2	
1 Private, clerk		4
Doubtful cases requiring eye examination in dark room, or further tests of hearing		
1 Medical officer, U.S. Army, or Reserve Corps	2	
1 Private, assistant		2
Genito-urinary, hernia, anus, varicose veins		
1 Medical officer, U.S. Army, or Reserve Corps	2	
1 Private, clerk		2
Skin, goiter, glands, reflexes, bones, joints, feet, hands		
1 Medical officer, U.S. Army, or Reserve Corps	2	
1 Private, clerk		2
Chest, heart and lungs, head, tremor		
1 Medical officer, U.S. Army, or Reserve Corps	2	
1 Private, clerk		2
To receive and care for Forms 135 and to check names on duplicate lists		
1 Private		2
To examine Forms 135, note errors or discrepancies and to sign forms		
1 Medical officer, U.S. Army	2	
Total	17	28

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necessary supplies are on hand, and makes such reports as may be required. In supervising the examination, if one man is working faster than another, and both are duly careful and thorough, he should give the faster man a part of the slower man's duty.

The clerks make on the forms prescribed, the entries directed. The assistant for vision and hearing changes test cards, points rapidly to different letters in the various lines, and either speaks and whispers for testing hearing, or closes one ear of the man examined while the examiner speaks and whispers. The other assistants clean and care for the instruments and appliances used in the special examinations.

The dental surgeon is an important member of the examining force. Hard and fast rules concerning teeth should be modified and the officer in charge, with the dental surgeon, should be given wide latitude in using judgment as to accepting or rejecting. Teeth should be considered not alone, but in conjunction with the gums, the condition of the mouth, and especially the general condition of the man.

The examination and signing of the physical form is a very important part of the examination and a part that takes much time. If the officer in charge has this duty he cannot, without neglecting other important work, sign or examine these forms every day. He will either have to delay them until all the examinations are finished, or work on them from time to time when opportunity permits. There should, therefore, be one experienced officer to examine and sign the forms of each group.

During the examination each man carries his physical form blank on which the proper entries are made as he passes along. At the completion of the examination his form is given to the clerk whose duty it is to receive and care for these forms until turned over to the officer who completes them. Men held for further examination have "held" slips attached to their cards, these slips indicate the reason for holding and the men may be sent to the hospital for observation or held in their companies. A final decision should be made by the officer in charge as soon as it is possible, and the "held" list should not be allowed to become large. A few cases it will be advisable to hold some time, to enable the officer to determine the true condition, but most cases can be acted on very soon, especially if observed in a hospital. If there are many of these "held" cases it will be advisable to examine them in a group.

The personnel given above is that recommended by Colonel Wilcox, for the physical examination only. If in addition to the physical examination it is necessary to make identification records, an additional personnel is required. The clerical work requires only accuracy and requires no special training. Photography and finger print work on the other hand can only be done satisfactorily by men trained in the work. Taking finger prints involves working in rather constrained positions and involves, therefore, considerable physical strain. Identification work demands absolute accuracy; good negatives and plain and distinct finger prints. The personnel necessary to make 1500 records a day is based on what experience shows

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men can do without undue strain, satisfactorily. It is necessary here also to have additional groups with the following personnel:

	Commissioned	Enlisted
1 Private to write names, etc., on slates..... (Three additional groups with same personnel.)		
2 Privates to develop and print.....		
1 Private to place negatives and prints in jackets and mark same.....		16
1 Private to take finger prints..... (Nine additional groups with same personnel.)		
1 Private to wash and dry fingers.....		
1 Private, clerk, to enter scars and marks and fill in briefs of Form 260.....	1	40
1 Medical officer to examine and pass or reject records and to sign same.....		
Total.....	1	56

At present the making of photograph records has been suspended.

Some photographs will not be satisfactory and will have to be taken again, best on the day following. Wounds and injuries of the face may make it necessary to wait a longer time. When so many men are being examined it would be advisable to have authority to pass finger prints that fall only slightly below the standard. Frequently one finger will have a temporary defect that obscures the lines and it may require weeks before the lines will be clear. If sufficient fingers show distinct lines and the record suffices for identification it would be better not to "hold" the print indefinitely, but when many or all fingers are unsatisfactory, another print is unquestionably necessary, and its making will have to be delayed possibly for several weeks.

In judging the physical fitness and effects of training of soldiers, medical officers of some European armies have frequently used the formula of Pignet, a French military surgeon who has devoted attention to various anthropometric questions involving men joining the colors. He has evolved an empirical factor which he regards as a reliable index of physical efficiency. It is obtained in the following manner: F equals H minus (C plus W). In this equation F represents the factor, H a man's height in centimeters, C his chest measurement at maximum expiration, also in centimeters, while W is his weight in kilograms. The larger the excess of H over (C plus W), or in other words the larger the factor, the poorer the man's physique. In rare cases (C plus W) may be larger than H and then F becomes negative. This occurs only in exceptionally powerful men. As representing ordinary individuals, it was found a man of five feet one inch in height, with weight of 145 pounds and minimum chest measurement of thirty-six inches gives a factor of minus three (−3). Similarly a man of five feet five inches, a weight of 139 pounds and a minimum chest girth of thirty-seven inches gives a factor of six; another man of five feet three

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inches, a minimum chest girth of thirty-four inches and a weight of 122 pounds gives a factor of eighteen; while a man of five feet nine inches with chest girth of thirty-two inches and weight of 119 pounds gives a factor of forty. It is obvious that the short, stout or sturdy type of man will in this scale give the lowest range of factor. After establishing his formula Pignet evolved a scale for classification of men according to the size of this factor, as follows: Factors less than 10, very strong; 10 to 15, strong; 15 to 20, good; 20 to 25, medium; 25 to 30, weak; 30 to 35, very weak; over 35, useless for the army.

In order to adjust Pignet's formula to English standards of weights and measures, Balck suggests the following formula:

F equals (W plus C) minus H.

In this formula the letters indicate the same qualities as in the original formula. The value of "F" is the index of efficiency, W the weight in pounds, C the chest measurement at greatest inspiration in inches (not expiration as in the original formula) and H is the height in inches.

In this form, the greater the value of F the better the man. In this it is unlike the original formula, from which this is derived, in which the less the value of F the better the man.

In its Anglicized or Americanized adaption, Pignet's formula is as follows: Under 80, useless; 80 to 90, weak; 90 to 100, fair; 100 to 110, good; 110 to 120, strong; over 120, very strong.

The values here are not exactly correlative with those of Pignet's scale, but are close enough for average practical purposes.

Orders, modifying somewhat the foregoing requirements, for enlistment in the national army, are being formulated but are not available for publication, as this book goes to press.

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CHAPTER XIX

VOLUNTARY AID

The Red Cross is an international, neutral society organized for the relief of human suffering wherever found. It was established in 1864, by an international convention in Geneva. Its flag bears the colors of Switzerland reversed.

The American National Red Cross Society was created by Act of Congress, approved January 5, 1905 and amended by Ch. 372, June 23, 1910 (36 Stat., 604). It is a body corporate and politic in the District of Columbia consisting of sixty incorporators, and of five other persons who are named by the President and selected by him from the Departments of State, War, Navy, Treasury and Justice, their associates and successors. This corporation is given the privileges necessary to carry into effect the provisions of the Act mentioned and to promote the purposes of the organization. Control of the delivery of the brassard in time of war is left to the military authorities. The Act further provides that the purpose of this society shall be:

To furnish volunteer aid to the sick and wounded of armies in time of war, in accordance with the spirit and conditions of the Geneva Convention.

To perform all the duties devolved upon a national society by each nation which has acceded to that treaty.

To succeed to all the rights and property which have been hitherto held, and to all the duties which have heretofore been performed by the American Red Cross, incorporated by the Act of Congress, in 1900, which Act is hereby repealed and the organization created thereby is hereby dissolved.

To act in matters of voluntary relief and in accord with the military and naval authorities as a medium of communication between the people of the United States of America and their Army and Navy, and to act in such matters between similar national societies of other governments.

The governing body of the American National Red Cross consists of a central committee numbering eighteen persons. It is composed as follows:

Six are appointed by the incorporators, six by the representatives of the State and Territorial societies at the annual meeting of the incorporators and societies, and six by the President of the United States, one of whom is designated by him as chairman and one each named by him from the Departments of State, War, Navy, Treasury and Justice.

The six members of the central committee appointed by the President at the annual meeting serve for one year; those elected by the incorporators and those elected by the State and Territorial societies serve three years.

The president is required to fill as soon as may be any vacancy that

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may occur in the chairmanship or in the membership of the central committee appointed by him. Any vacancy that may occur in the six members of the central committee appointed by the incorporators or in the six to be appointed by the representatives of the State societies is filled by temporary appointments made by the remaining members of the six in which the vacancy may occur. Such appointees serve until the next annual meeting.

The central committee has power to appoint from its own members an executive committee of seven persons, five of whom are a quorum, who, when the central committee is not in session, have and exercise all the powers of the central committee.

Voting by proxy is not allowed at any meeting of the incorporators, annual or special, nor at any meeting of State or Territorial societies organized under the provisions of the charter.

The society on the first day of January of each year must make and transmit to the Secretary of War a report of its proceedings for the preceding year, including a full, complete, and itemized report of receipts and expenditures of whatever kind, which report is duly audited by the War Department.

Congress reserves the right to repeal, alter, or amend at any time the Act creating this society.

The organization of the State and Territorial branches of the American National Red Cross differs somewhat in the several states but such differences are of relatively minor import. The society acquired about 260,000 new members in 1916. It had only a relatively small endowment however, (one million dollars). Prior to the entrance of the U.S. into this war about one person in each 240 in the U.S. was a member while one in every 40 in Germany was a member and in Japan one in eleven.

All volunteer aid from any society or association must be furnished to the army through the National Red Cross.

The personnel of the American National Red Cross may be employed for service with the army in time of war with the authority of the Secretary of War on recommendation of the Surgeon General. No one will be so employed unless he or she is physically qualified for service.

The representative of the War Department on the central committee has charge of all Red Cross personnel and material intended for the service of the War Department. He supervises the training of the personnel and the collection of material for war, making such inspections as may be necessary, acquaints the War Department with plans for mobilization and utilization of the Red Cross in war, and keeps the War Department informed of the nature, extent and distribution of the assistance that the Red Cross is prepared to furnish. In war he issues Red Cross brassards and signs and issues certificates of identity to those authorized to receive them. When considered necessary by the Surgeon General, brassards and certificates of identity may be issued by chief surgeons.

Brassards and certificates of identity are numbered consecutively in the same series.

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In time of war delegates of the Red Cross may be assigned to duty in the field wherever, in the judgment of the Surgeon General, their services can be utilized. Ordinarily, they serve at the headquarters of the lines of communication. The duty of such delegates is to act as representatives of the central committee.

There should be active propaganda of the purposes and value of this society in time of peace, in order that it may be fully prepared for the drain on its resources, personal and financial, in time of war. The society before this war had been engaged chiefly with local relief work, but has taken up the education of the public along general lines teaching them the necessity for providing better medical aid for the sick and wounded in time of national conflict. By the end of August, 1917, its membership had risen to 3,500,000 and 100,000 new members were being added daily.

In order that the public may be educated in the value of Red Cross organization, active field secretaries have been appointed to travel throughout the country organizing local branches, raising funds and instructing the people. Upon various railroads Red Cross cars are in operation, going to many points. Their occupants give lectures and demonstrations on Red Cross work and first aid.

An adjunct for the Red Cross work itself is the formation of Junior Red Cross Societies under the guidance of local organizations. Such a measure is of value not only to the Red Cross itself but to the members of such societies themselves in the spirit of humanity inculcated.

The following are the regulations published in 1917 governing the employment of the American Red Cross in time of war:

1. The organized Red Cross serving with the land forces will constitute a part of the sanitary service of the land forces.

2. When the War Department desires the use of the services of the Red Cross in time of war, or when war is imminent, the Secretary of War will communicate with the chairman of the service required, the kind and number of Red Cross units desired, and designate the place or places where the personnel and material will be assembled.

3. When any member of the Red Cross reports for duty with the land forces of the United States, pursuant to a proper call, he will thereafter be subject to military laws and regulations as provided in Article 10 of the International Red Cross Convention of 1906, and will be provided with the necessary brassard and certificate of identity.

4. Except in cases of great emergency, Red Cross personnel serving with the land forces will not be assigned to duty at the front, but will be employed in hospitals in the home country, at the base of operations, on hospital ships, and along lines of communications of the military forces of the United States.

5. Before military patients are received in a Red Cross hospital, specific authority must in the first instance be received from the Secretary of War, and the director must be a commissioned officer of the Medical Corps or, in special cases, an officer of the medical section of the Officers' Reserve

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Corps designated by him to command it. Such officer will be held responsible for the management, discipline, and records of the institution; he will regulate admissions and discharges and see that the interests of both the Government and the patients are conserved. Under specific authority, however, military patients may be sent to Red Cross general hospitals not commanded by a commissioned medical officer under such conditions as to allowances, reports, and the control of military patients as the Secretary of War may prescribe.

6. No units, sections, detachments, or individuals of the American Red Cross will be accepted for service by the War Department, unless previously inspected by a medical officer of the Army, and found qualified for the service expected of them.

7. The American Red Cross may, when war occurs or is imminent, be called upon by the War Department to assist the sanitary service by furnishing organized units, sections, detachments, or individuals whose services may be necessary, such as physicians, surgeons, dentists, chaplains, laboratory experts and their assistants, pharmacists, nurses, stenographers and clerks, hospital personnel, sick transport personnel.

8. Persons enrolled by the American Red Cross in its units or as individuals who are accepted for the sanitary service under Par. 7, and become a part of it under Par. 1, shall be paid by the National Government according to the nature of their services whenever authority of law exists for such payment either on military rolls or as civilian employees.

Red Cross volunteers are persons who give their services without pay, and such volunteers serving with Red Cross organizations, or as individuals under Red Cross commissions, warrants, or letters of appointment, shall, during the period of such service with the sanitary department of the Army, be given the respect due to their positions and services and shall be furnished such appropriate quarters, beds, food, and transportation as may be necessary for the discharge of their duties. They shall be entitled to wear a distinctive badge approved by the Secretary of War and issued by the American Red Cross.

All units, sections, detachments, or individuals of the American Red Cross, upon being accepted for duty by the Secretary of War in time of war, or when war is imminent, shall from the date of such acceptance be subject to the orders of the proper military authorities, and such Red Cross personnel when serving with the Armies of the United States in the field, both within and without the territorial jurisdiction of the United States, are subject to the Articles of War.

9. To facilitate the enrollment and training of Red Cross personnel it shall be divided into three classes:

Class A. Those willing to serve wherever needed.

Class B. Those willing to serve in home country only.

Class C. Those willing to serve at place of residence only.

Only persons belonging to Class A shall be enrolled in Red Cross organizations intended for service at military bases or along the line of com-

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munications. Individuals whose services may be needed in the zone of the line of communications and base may be also enrolled in Class A.

Class B will be enrolled for service in hospitals and other sanitary institutions that may be established in the home country. They may be organized into such units and receive such training as may be deemed advisable.

Class C will be composed of individuals of local Red Cross societies, who on account of their occupation or experience in the care of sick and other hospital duties, may be expected to render efficient service in military institutions established in their locality.

10. The Red Cross units organized for service with the Army or for the purpose of training personnel therefor are:

1. Ambulance companies.
2. Base hospitals.
3. Hospital units.
4. Surgical sections.
5. Emergency nurse detachments.
6. Sanitary training detachments.
7. Information sections.
8. Refreshment units and detachments.
9. Supply depots.
10. General hospitals.
11. Convalescent homes.

11. Ambulance companies will supplement and assist the organizations of the Regular Army engaged in the transportation of the sick and wounded from the zone of the advance to base hospitals and from the base to general hospitals.

The personnel may be used to man ambulance trains, hospital trains, hospital ships, and other agencies for sick transport by land and water, or for the establishment of emergency hospitals. The organization will be as follows:

1 Captain.	2 Cooks.
4 Lieutenants.	2 Assistant cooks.
1 First Sergeant.	20 Chauffeurs.
11 Sergeants.	2 Musicians.
5 Mechanics.	43 Privates.

and such other personnel as may be approved by the Secretary of War.

The training of ambulance companies should include instruction in first aid, elementary hygiene, and the drill of sanitary troops. The personnel of such companies should be made practically familiar with the use of the various appliances (including improvisations) for transporting sick and wounded, such as litters, ambulances, and other vehicles, with the fitting up of trains and ships for patients, and with other similar duties. Instruction should also be given in the organization and conduct of rest stations. Some personnel of each company should also be made proficient in methods of disinfection.

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12. Base hospitals are enrolled by the Red Cross for service at a military base. Their organization will correspond approximately to that of an Army base hospital as prescribed in the Manual for the Medical Department, except that the male administrative personnel may be in time of peace one-third of the enlisted strength of that of an Army base hospital, and such additional specialists and volunteers may be enrolled as the Secretary of War may approve. When called into the service of the United States, Red Cross base hospitals will be furnished by the Quartermaster Corps of the Army with transportation, and subsistence for all except commissioned officers, for the personnel and equipment to the designated station and with such buildings or tentage or both as may be needed for the care of the patients and the administration of the hospital. The Quartermaster Corps will provide suitable quarters, beds, and subsistence for the personnel, including duly enrolled Red Cross volunteers.

The medical equipment when not furnished by the War Department will conform as closely as possible to the standard Medical Department equipment, and will be stored when practicable by the War Department at a point as convenient as may be advisable to the parent hospital of the unit.

The organization of a base hospital will be:

A director, who will be assisted by the following staff: An adjutant, a quartermaster, who are staff officers, and a registrar who may be an officer, noncommissioned officer, or specially qualified civilian, and such subordinate administrative personnel as may be necessary.

When mustered into the United States service the director shall act as assistant to the commanding officer of the hospital, when one is designated under section 5, and in addition to his duty as assistant he shall be chief of the surgical, medical, or laboratory service of the hospital.

A surgical section, which will include a chief of the surgical service and eight staff surgeons, including an orthopedist and one or more specialists in the treatment of diseases of the eye, ear, nose, and throat.

A medical section, which will include a chief of the medical service and five staff physicians including a specialist on nervous and mental diseases.

A laboratory section, which will include a chief and two assistants who will have competent knowledge of pathology, bacteriology, serology, and roentgenology.

Two dentists, skilled in oral surgery.

In cases where the American Red Cross organize a reserve for a base unit the relief of officers of the professional staff of such unit by officers of the reserve may be authorized, when the interests of the service permit.

50 nurses, members of the Red Cross nursing service, one of whom shall be chief nurse and one of whom may be a dietist.

25 volunteer nurses' aids.

150 male administrative personnel, who may be members of the Enlisted Reserve Corps or may agree to enlist in the sanitary service when called into active service. This personnel will have the proper quota of noncom-

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missioned officers, as prescribed by the Manual of the Med. Dept. for base hospitals.

15 employees.

Such Red Cross volunteers as may be authorized by the Director General of Military Relief, upon the approval of the Secretary of War.

13. Hospital units are intended to supplement and assist established military hospitals. Sections of hospital units may also be assigned to duty on hospital trains and ships and to other military sanitary organizations.

Hospital units are organized as follows:

1 director.
1 adjutant.
2 chiefs of service.
4 staff physicians.
1 head nurse.
20 nurses.
3 clerks, who may be women, and such number of orderlies as may be necessary.

14. Surgical sections are special detachments intended to reënforce the operating staffs of hospitals in times of emergency. They consist of:

1 director.
3 surgeons.
1 head nurse.
6 nurses.
2 orderlies.
1 recorder who should be a stenographer and may be a woman.

The recorder should prepare the reports and records of cases and conduct the official correspondence of the section with such other clerical work as may be required by the commanding officer of the unit to which the section may be attached. The individual members of these units shall be kept intact and not be detached from them for other duty except by order of the commanding general of an Army corps or separate division.

15. Emergency detachments of nurses are organized to meet sudden calls from the sanitary service of the Army, or other emergencies. They will be used to supplement the nursing service of military hospitals already established, or be assigned to duty on hospital ships, hospital trains, or any other service where groups of nurses may be needed. Each detachment consists of 10 nurses, one of whom is designated as head nurse and acts as such until the group is assigned to duty under the supervision of an Army chief nurse, when her duties will be the same as those of the other members of the detachment.

16. Sanitary training detachments are organized primarily for the purpose of instructing men so that they may perform efficiently the duties pertaining to the enlisted medical service of the front and line of communications with the Regular Army or with Red Cross units in time of war. When so trained these detachments may be used by the Red Cross in times of national disaster. Sanitary-training detachments will be organized as follows:

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1 commandant.	4 mechanics.
1 assistant commandant.	4 carpenters.
1 quartermaster.	2 cooks.
1 pharmacist.	2 clerks.
5 section chiefs.	40 privates.

The section chiefs will have the title and rating of sergeants, and one of them, selected by the commandant, will act as first sergeant. The commandant and assistant commandant will be physicians in good standing.

17. Information sections are composed of a section chief and such clerical assistants as may be necessary. They may be attached to base hospitals, general hospitals, or to the office of the senior medical officer of prisoners' camps, or other military establishments where their services may be necessary. They will conduct, under the supervision of the commanding officer of the organization to which attached, the correspondence of the patients or prisoners, report the addresses, physical condition, and such other information as may be authorized to the Red Cross information bureau at Washington, and conduct the correspondence with that bureau.

18. Refreshment units and detachments: A refreshment unit is an enrolled organization equipped to furnish refreshment to the sick and wounded and to troops at halting places and places of trans-shipment. Its organization and equipment is such as may be prescribed by the American Red Cross. Refreshment detachments are temporary organizations for the same purpose.

19. Supply depots are depots for the care, preservation, and issue of Red Cross property. When located on Government reservations they shall be entitled to military protection like Government property.

20. Red Cross general hospitals may be organized at such places in the home country as the Secretary of War may approve for the reception and treatment of sick and wounded soldiers. They may be organized in connection with a civil hospital or group of hospitals, or where there are suitable buildings and grounds, public or private, available. Such general hospitals when organized shall be registered in the Office of The Adjutant General.

Red Cross general hospitals may be taken over by the War Department and administered as Army hospitals under such conditions as may be mutually agreed upon, or they may be administered as Red Cross units under such conditions as to allowances, reports, and the control of the military patients as the Secretary of War may prescribe.

The organization of general hospitals shall in general conform to that of the Army general hospitals, but as to the number of beds and personnel and details of organization shall be such as the Secretary of War may approve upon recommendation of the Surgeon General. Acceptance for registration shall be regarded as evidence of approval. Provision will be made in the organization of Red Cross general hospitals for a visiting staff and for resident physicians or interns.

All medical officers of the above units shall be physicians, surgeons,

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or specialists in good standing who have been selected by the Director General of Military Relief of the American National Red Cross.

21. Convalescent homes will be such private residences or other buildings or institutions as are accepted by the American Red Cross as complying with the necessary conditions for providing accommodation for disabled officers and men who require no further active medical or surgical treatment, and who are awaiting discharge from the service on account of permanent disability. The expenses in connection with the upkeep of convalescent homes will be met entirely by private funds, except that an allowance for subsistence may be made by the Government when desired. Convalescent homes will be at all times subject to inspection by duly authorized representatives of the War Department.

22. A register will be kept in the office of the Surgeon General of the Army, upon which will be entered the name, place, strength, equipment, and efficiency of organized Red Cross units. No organization will be entered on the register, however, unless it shall have been inspected and approved by a representative of the War Department. When specially authorized, medical officers of the Army detailed for duty with the Red Cross may act as representatives of the War Department for the purpose of inspecting general and base hospitals and other military Red Cross units. In such cases their reports shall be made directly to the officer giving such authorization, a copy being furnished the Director General of Military Relief. A Red Cross unit that has been inspected and found qualified will be carried on the register for one year after date of such inspection.

Applications from Red Cross organizations for entry upon the Surgeon General's register, for continuance on said register, will be submitted annually on or before June 1 through Red Cross channels to the Adjutant General of the Army.

23. Uniforms: Members of organized units serving under the Medical Department will wear, if members of the Officers' Reserve Corps or Enlisted Reserve Corps, the uniform of these corps. Otherwise the uniform prescribed by the central committee and approved by the War Department will be worn. Their equipment will be similar to that used in the sanitary service.

24. The personnel serving with the land and naval forces in time of war or threatened hostilities will, while proceeding to their place of duty, while serving thereat, and while returning thereform, be transported and subsisted at the cost and charge of the United States. Red Cross supplies that may be tendered as a gift and accepted for use in the sanitary service will be transported at the cost and charge of the United States.

25. Suitable quarters or tentage will be provided by the Quartermaster Corps for Red Cross units called into the sanitary service by proper authority.

General Orders, No. 82, War Department, July 5, 1917, read in part as follows:

2. To facilitate the discharge of their authorized functions, duly quali-

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fied members of the Red Cross other than units, sections, and individuals accepted for service by the War Department and incorporated in the commissioned or enlisted strength of the Medical Department of the Army (Pars. 6–8, Regulations Governing the Employment of the American Red Cross, Dec. 18, 1916) are recognized by titles with assimilated rank and for appropriate duties, as shown in the following table:

OFFICIALS

Grade	Title	Assimilated rank	Duties
1	Chairmau central committee.	Major general.....	Indicated by title.
1	Chairman war council.	Major general.....	Indicated by title.
2	Members of war council.	Brigadier general.....	Indicated by title.
2	Vice chairman central committee.	Brigadier general.....	Indicated by title.
3	Director general.....	Colonel.....	1. In charge civilian relief. 2. In charge military relief.
4	Assistant director general.	Lieutenant colonel.....	1. Indicated by title. 2. Directors of certain bureaus. 3. Other duties of like importance.
4	Commissioner	Lieutenant colonel.....	1. Commissioners to any theater of war (as France, Italy, Russia, etc.).
5	Director.....	Major.....	1. Directors of certain bureaus. 2. Representing American National Red Cross at Army or corps headquarters; at headquarters of line of communications or base abroad; or at a divisional camp or cantonment in the United States. 3. Base hospitals. 4. Supply depots. 5. Other duties of like importance.
6	Assistant director.....	Captain.....	1. Representing the American National Red Cross with any detachment of the Army less than above. 2. Storekeeper.
7	Assistant director.....	First lieutenant.....	3. Assistant to any official of higher grade. 4. Adjutant or quartermaster of a base hospital. 5. Other duties of like importance.

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		EMPLOYEES	
8	Secretary.....	Sergeant major.....	Clerical.
		RED CROSS BASE HOSPITALS	
9	Red Cross master hospital sergeant.	Master hospital sergeant, Medical Department.	Base hospitals.
10	Red Cross hospital sergeant.	Hospital sergeant, Medical Department.	Base hospitals.
11	Red Cross sergeant, first class.	Sergeant, first class, Medical Department.	Base hospitals.
12	Red Cross sergeant...	Sergeant. Medical Department.	Base hospitals.
13	Red Cross corporal....	Corporal, Medical Department.	Base hospitals.
14	Red Cross cook.....	Cook, Medical Department.	Base hospitals.
15	Red Cross private, first class.	Private first class, Medical Department.	Base hospitals.
16	Red Cross private....	Private, Medical Department.	Base hospitals.
17	Red Cross laborer....	Private, Medical Department.	Any duty imposed.

3. Officials (grades 1–7, inclusive) will be nominated by the chairman of the war council, and, if properly qualified, will be given commissions signed by the Secretary of War and countersigned by the chairman of the war council. These commissions confer no military authority, obligation, or other incident attached to rank or office, nor any right to pay or allowances of similarly described grades in the United States Army. They serve as certificates of identity authorized by Par. 5 of the proclamation by the President published in General Orders, No. 170, War Department, 1911. They indicate to members of the land and naval forces that officials of the assimilated rank indicated in their respective commissions are persons in whom the Commander in Chief and the American National Red Cross have confidence and for whom the above authorities enjoin coöperation in the discharge of their functions and that courtesy and respect due to persons designated for such important duties to humanity.

4. Warranted employees (grades 8–13, inclusive) will be appointed by the proper superior of the American National Red Cross, being given warrants signed by officials designated by the American National Red Cross.

Employees (grades 14–17, inclusive) will be given certificates of identity signed by officials designated by the American National Red Cross.

The same restrictions upon military authority, obligations, pay, allowances, etc., described in Par. 3 as applicable to commissions, apply to warrants and certificates of identity.

5. To avoid the presence in European theaters of war of persons who may

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not be acceptable to the authorities of any foreign Government or in whose loyalty there may not be placed undoubted confidence by the Government of the United States as well as of such Governments, the name, residence, and former employment of each member of the American National Red Cross below grade 7 who is to be sent abroad will be furnished to the Adjutant General of the Army for transmission to the Chief, War College Division of the General Staff Corps. If employed abroad, similar information will be furnished the commanding general, United States forces in France.

6. Pursuant to authority conferred by section 125 of the act of Congress approved June 3, 1916, the American National Red Cross is designated by the Secretary of War as an organization, the members of which are permitted to wear their prescribed uniforms; in this case, the uniform of the United States Army, or such other uniform as may be recommended by the American National Red Cross and approved by the Secretary of War.

7. As insignia of title and assimilated rank the following distinctive marks are prescribed, to be worn as indicated:

(*a*) On cap, hat, or helmet.

Grades 1–7, inclusive: Greek cross in red enamel above the coat of arms of the United States in bronze metal.

Grades 8–17, inclusive: Greek cross in red enamel.

(*b*) On both sides of collar of coat or shirt.

Grades 1–17, inclusive: The letters U.S. in bronze metal and Greek cross in red enamel, placed as are the U.S. and corps insignia of officers of the Army.

(*c*) On both sleeves of coat or shirt, midway between the elbow and the end of sleeve.

Grade 1: Horizontal band of blue cloth, ¾ inch in width about the arm. Two stars of silver metal, 1 inch apart and 1 inch above the band, and a Greek cross of red cloth 1 inch above the interval.

Grade 2: Same as 1, with one star 1 inch above center of band, in lieu of two stars.

Grade 3: Five bands of blue cloth, each ⅜ inch in width and 2½ inches in length, midway between elbow and end of 1 inch above the band, and a Greek cross of red cloth 1 inch above center of upper band.

Grade 4: Same as 3, with four blue bands.

Grade 5: Same as 3, with three blue bands.

Grade 6: Same as 3, with two blue bands.

Grade 7: Same as 3, with one blue band.

When dress uniform is worn, bands will be of gold braid instead of blue cloth.

Grades 8–14: Of same forms and in same positions as prescribed for chevrons of similar grades of the enlisted strength of the Army, but of dark blue cloth with Greek cross in red cloth 1 inch above each chevron.

Grades 15–17: Greek cross of red cloth on sleeve midway between shoulder and elbow.

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8. Uniform and insignia will be supplied by the American National Red Cross.

9. The use of military titles, rank, and uniform is authorized only for the American National Red Cross representatives actually in foreign countries constituting the theater of active war.

The conduct of relief societies is both a profession and a business. The field agent of the organization must be a man of successful business experience, energetic, and resourceful. He should be a civilian, but when assisting the military establishment, he should have army officers of the Quartermaster's and Medical Departments associated with him in an advisory capacity. The distributing agents of the society should be only those who have proven their reliability. They should be men who have business knowledge, tact and vigor, as well as character. Incompetents should be excluded from the employ of the Red Cross even more rigorously than from other business organizations, for not merely business success but human lives and public welfare depend on the efficiency with which their work is done.

The enrollment of nurses for Red Cross work was actively carried on in time of peace, and Red Cross Nursing Societies, composed of graduates from good civilian training schools, were organized throughout the United States.

Physicians also were enrolled for duty with the various Red Cross stations. Retired army and navy medical officers who are unable to withstand the more rigorous conditions at the front are well fitted for this work, especially in executive positions. Civilian physicians who may be unable for other reasons to do active duty with troops were asked to enroll themselves with the Red Cross, but the physicians enrolled were limited by a rule of the Red Cross to those who are approved by the American Medical Association or by local medical societies. Enrollment does not exempt from draft.

Red Cross funds are appropriated for current expenses, for expansion of the society, and for various sinking funds. All investments of such funds are not only secure, but are capable of easy and prompt conversion into cash. This fund is carefully audited and administered. At the end of each year all committees and local societies balance their accounts and submit the budget for the following year, in order that the general society may have knowledge of its assets and prospective expenses. A Federal law provides that not more than 5 per cent. of the funds may be used for administrative purposes. The society formulated in time of peace a definite plan of action regarding what its operations would be in different parts of the United States in time of war.

The Red Cross authorities should have available such information as the capacity and location of the public hospitals in the country, the means of intercommunication on waterways, railways (both steam and electric), distances and trackage from city to city, rolling stock available, local facilities for removal of wounded from hospitals to railroads and *vice versa*,

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character of roads, pikes, etc. In some foreign countries the Red Cross annually took an option on hospital supplies in time of peace to prevent the raising of prices of the same which always follows the outbreak of war.

The accumulation of supplies suitable for field service in time of peace is desirable, for they are of a peculiar character and cannot be assembled rapidly on the outbreak of war. In Austria Hungary, such provision was made especially by the Teutonic Order of Knighthood.

The equipment of hospital trains and ships, as well as of the base hospitals and rest stations, should be assembled in time of peace, so that these institutions could be readily established. In Austria 12 hospital trains were organized in time of peace by the Knights of Malta and the personnel on their estates carefully trained in their duties as train attendants.

Though voluntary aid societies sometimes chafe when subjected to military restraint, such military control is indispensable, in order that the official records of each case treated may be duly authenticated, that discipline may be maintained, service of all units harmonized and coördinated and administration unified.

In both France and Germany voluntary aid is used on the lines of communication and in the latter service in emergencies even at the front. In America, where very few citizens have had military training and where the value of discipline is widely discredited, voluntary aid at the front would probably be a greater source of embarrassment than it would a help, at least at the outbreak of hostilities. Americans are not so amenable to discipline as are the citizens of the countries mentioned and though they possess great initiative, are less willing to subordinate themselves at first adequately to the command of others. The prime essential in war is discipline. Lack of this especially at the front leads to inextricable confusion and perhaps disaster. At the base where defects are more easily corrigible the disadvantages that come from lack of discipline in Voluntary Aid organizations are not so serious as they would be further forward.

In time of war general depots should be established at the base and run on the same principle as those of the army. All supplies should be checked as received and then carefully sorted. A large amount of material will be received which is of no value in Red Cross work. That which can be utilized in other ways should be distributed to the associated and other charities, where it will do most good. That which can be used by the Red Cross should be carefully arranged so that requisitions can be filled without confusion or loss of time. Ample shelf room, in storerooms, and keeping records on loose leaf ledgers or cards, greatly expedite the transaction of business. From the local warehouses supplies may be shipped to the distributing depots at the front as they are needed.

Supply depots should be established at the base and, along the line of communications. In the Austrian service such depots provided chiefly bedding, comestibles, dressings and surgical appliances. The Austrian and Hungarian societies also operated rolling depots and kitchens, installed in railway cars (3 or 4 cars to a unit). These replenished hospitals and depots

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at the front and subsisted patients en route on ambulance trains to the rear.

Rest stations with restaurants in connection should also be established at the points where they may be most needed.

The charter of the American National Red Cross provides that one of its functions shall be to act "as a medium of communication between the people of the United States and their Army and Navy." This is one of the most important and useful works in which the society can be employed.

After engagements the War Department, already overwhelmed with its official duties, is deluged by inquiries about the wounded. Immediately on the raising of a regiment local representatives of the society should collect all the information necessary for a card index system, which is to be maintained by a Bureau of Information. Copies of these cards should be filed with the central bureau, and after this, whenever a soldier or sailor becomes ill, or is killed or wounded, further information should be forwarded to the bureau, by the surgeon who has knowledge of his case. In this way, whenever a soldier or sailor is given relief a note of it is made and the central information office notified. Such a system is enforced in Germany and Austria, where the surgeon of a regiment reports those killed and missing and the C.O. of a field hospital reports nature and degree of injury. Fairly accurate information of the movements of the man in question is thus always kept on file and inquirers can be supplied therewith. This relieves the War Department of an immense amount of correspondence, and forms a valuable aid to the Pension Office. A record should also be kept of the relief afforded the individual soldiers and sailors of another power.

In the United States, voluntary aid has been concerned chiefly heretofore with disasters to the civil communities, and with the prevention of disease. Its interest in the military service was quite subordinate. In continental Europe the reverse was the case. The voluntary aid organizations there were in much closer touch with the military authorities, more directly under their control and more interested in the military service, and their authority was more directly centralized. The organization in the United States is comparatively loose, its authority over its component parts is less, and it operates through committees in many instances instead of individuals.

Excellent discussions of foreign voluntary aid societies are found in McPherson's treatises on the Medical Service of the French, Italian, German and Austro-Hungarian armies. A study of the organized voluntary aid as employed in these services offers many valuable suggestions.

In Europe the Voluntary Aid Societies are much more highly developed than they have been in the United States, and have provided for many of the contingencies that would arise in war. In France there have been published also, the explicit, minor regulations which would govern voluntary aid hospitals and other sanitary units, which they might establish.

Voluntary Aid in France is organized:

1. By government decree.

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2. By Army Medical Service Regulations.

3. By the regulations of each individual society.

Before any association or society is allowed to supplement the Army Medical Service in time of war, it must be declared to be an establishment of public utility by decree of the President of the French Republic.

Until the outbreak of this war three societies have thus received Government recognition.

The rôle of these societies is defined as follows:

1. To create auxiliary hospitals in the area of operations, and in other localities designated by the Minister of War or General's commanding districts, and on proposals submitted by the Army Medical Service.

2. To establish auxiliary field hospitals on the lines of communication.

3. To forward, whenever the Minister of War may direct, all gifts collected by them for the sick and wounded.

4. In addition to these duties one of the authorized societies is entrusted with carrying out a service of railway infirmaries, where the sick and wounded, passing through by train, etc., may obtain refreshment, and, if necessary, be temporarily received for hospital treatment.

None of these societies is allowed to perform service at the front nor with the evacuation hospitals.

Any associations other than those already recognized which may be formed for rendering voluntary aid in time of war must be attached to one or other of the three recognized societies.

The following limitations are imposed concerning the personnel which the societies may employ in their hospitals, etc.

(*a*) With the exception of a few men, specially nominated, only men exempt from all military obligations may be enrolled. They must be French subjects.

(*b*) Doctors are subject to these limitations, and no officer, doctor, apothecary, or intendance officer belonging to the reserve or territorial army can be employed in voluntary aid except under similar restrictions.

(*c*) The nomination of doctors for voluntary aid service must be approved by the Minister of War. The executive medical officers must be doctors of medicine, and the apothecaries must hold diplomas in pharmacy. Each society appoints a delegate, who must be a member of its head committee, to represent it at the War Office. He must be approved by the Minister of War, who appoints, on his side, an army medical officer to represent the War Office in the society.

The personnel employed by the societies on the lines of communication is under military law, and subject to the jurisdiction of military courts.

The wearing of a uniform by the personnel of the aid societies is authorized. The societies propose the uniform they wish to adopt, and the Minister of War approves on the advice of the Superior Committee.

The members of the societies may wear a distinctive medal, approved under the same conditions.

The societies provide themselves with brassards in time of peace.

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These are submitted to the chief surgeon of the army corps of the district to which the personnel of each auxiliary hospital, etc., belongs, and he must stamp and number them. At the same time a card of identity, authorizing the wearing of the brassard, is prepared and kept with each brassard. The card is numbered with the same number as the brassard, bears the name of the recipient of the brassard, and is signed by the district delegate of the society to which he belongs and by the chief surgeon of the army corps. Everyone wearing the brassard must have this card in his possession.

No hospital can be opened by the societies except those whose eventual installation or mobilization has been arranged in time of peace and authorized by the War Office, unless proposed by the chief surgeon of a district or of the lines of communication. The power to close hospitals belongs to the same authorities.

The societies are compelled to provide themselves with all material and equipment necessary for the work of each establishment, organized by them.

Under exceptional circumstances, the War Department may make up deficiencies by lending material to the societies, should the opening of any hospital not fully provided for by them be considered indispensable.

In such cases the societies are responsible for the custody of the material loaned. An inventory of this is kept by the hospital to which the articles have been handed over, and by the War Office.

The societies are required to provide out of their own funds, in all localities where they have organized hospitals, etc., the necessary medical and surgical equipment, fuel, provisions, etc., for the treatment of the sick, and care of wounded.

Should the locality be invested and their resources fail on that account, the War Department may furnish them with provisions and other necessary articles, but on condition of repayment, so far as the funds of the society permit.

The class of sick and wounded sent to hospitals of the voluntary aid societies is determined by the military authorities.

The dieting and interior economy of the voluntary aid hospitals follow as nearly as possible the requirements of the Army Medical Service Regulations.

All these establishments are placed under the authority of the local military commander and of the senior military medical officer of the station or the chief surgeon of the district, so far as the control, discipline, sanitation and carrying out of the duties entrusted to the hospital are concerned.

The duties of the hospital authorities in the event of the death of a patient are the same as those of the authorities of military hospitals in time of peace.

The contribution that is made to the funds of the societies by the State in consideration of the work done in the hospitals is determined by executive decree. These contributions are:

1. One franc ($0.193) daily for every sick or wounded soldier treated

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in the hospitals. For the day of admission and the day of discharge nothing is allowed, but this allowance is given for day of decease.

2. Twenty-five centimes (one-fourth franc) for each meal provided at railway infirmaries to patients or to the personnel accompanying them.

It is obligatory on the societies to carry out funeral services and bury soldiers dying in their hospitals, at their own expense, and in accordance with the rules prescribed in the Army Medical Regulations.

The senior medical officers of the navy at all admiralty ports have the same rights and duties as do chief surgeons of military districts in respect to voluntary aid societies.

Foreign voluntary aid societies are allowed to supplement the French Medical Service under special authority of the Minister of War, who prescribes the conditions under which they may work.

The Army Medical Regulations define the administration of medical establishments provided by voluntary aid societies. It is obvious from the foregoing that voluntary aid in France comes under clearly defined Government regulations. An estimable advantage is gained by these rules. The societies know exactly what they are to do, and what they are not to do.

The details of the formation, equipment, personnel, etc., of all voluntary aid establishments are minutely laid down in French Army Medical Regulations.

Other sections and paragraphs of the regulations refer to the procedure in case of patients dying in the infirmaries, preparation of wills, method of preparing and distributing diets, rendering accounts for repayment by the government, preparation and storing of articles required for infirmaries in time of peace, etc.

In France, a voluntary aid society is entrusted with the care of railroad infirmaries. These "Rest Stations" are placed along the railways at distances of not less than six hours journey by rail from one another. They are established at railway stations which the military medical authorities have inspected. They have also indicated how the available rooms are to be utilized. The society entrusted with their operation has the personnel and equipment ready for use in time of peace.

Arrangements are made at each infirmary for receiving into a ward any seriously ill or dying patients from the trains passing through. The beds for this purpose are provided usually from local sources; but at larger railway stations one or two auxiliary field hospitals or sections of field hospitals may be established for reception of entire train loads of sick and wounded intended for distribution amongst the hospitals of the locality. Local physicians may give their services at these infirmaries gratuitously, or physicians of the Red Cross service may be assigned. Payment of the general expense is arranged by the local committee of the society.

The object of these rest stations is:

(*a*) To give medical and surgical aid to sick and wounded passing through by train.

(*b*) To receive sick and wounded and eventually pas them on to

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hospitals in the neighborhood, if their condition is likely to be aggravated by continuing their journey by rail.

(*c*) To send on to the base by the line of rail the sick and wounded sent to the railway station from hospital establishments in the neighborhood.

(*d*) To provide, as laid down, meals and refreshments for sick and wounded sent down the lines of communication or temporarily received into the infirmaries.

ACCOMMODATION

Every rest station is provided with the following accommodations:

A medical officer's room.

One ward.

A kitchen.

Barracks for the orderlies.

Mortuary.

Waiting room for sick.

Dining room for sick under treatment and for orderlies.

Quartermaster's office.

These rooms are obtained, if possible, in the station building itself. They must be well lighted and ventilated, and the ward must have 20 cubic meters air space per bed (equal to about 800 cubic feet). The number of beds usually is 5 or 6; but stations where sick and wounded are received for distribution to other hospitals may accommodate 200 patients.

The work carried out at these stations is entrusted to the Societé de Secours aux Blessés, and, failing them, to the Army Medical Service.

The transportation arrangements at stations where there is a rest station are in the hands of a committee composed of the senior medical officer, and the station master. Under these are: a subaltern officer, a secretary, two orderlies. The medical arrangements are in the hands of the following personnel employed by the Societé de Secours: 1 senior medical officer, 1 assistant medical officer, 1 quartermaster, 1 chief ward-master, 1 clerk, 1 ward orderly and 12 other orderlies.

The surgical and medical equipment is provided by the voluntary aid society. The senior military officer, may, if necessary, requisition on the Army Medical Service for other articles, on repayment by the society.

Each patient sent down the line has a medical transfer certificate and card of identity.

The transfer certificate accompanies him throughout the process of evacuation from one hospital to another.

All particulars must be entered in an admission and discharge book, whenever a patient is taken into the infirmary even although he is passed on immediately to a hospital in the vicinity.

Valuables and the articles of kit in his possession are also entered in the registery.

Each soldier or patient admitted takes with him two days' bread ration supplied to him by the evacuation hospital.

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If he is admitted en route into any infirmary or other hospital, he is given another two days' bread ration on continuing his journey. This is supplied by the infirmary or hospital from which he is evacuated.

If this journey exceeds forty-eight hours, a supplementary ration is supplied at a station on each line of evacuation, advised beforehand by the military commandant of the station at the head of the line.

During the journey each patient or soldier accompanying the train, receives 4 meals every twenty-four hours, 2 of which are of the nature of refreshments and 2 full meals. For this reason the infirmaries are at distances of six hours from one another along the line.

For the purpose of supplying these meals, the railway stations are divided into two series:

1. *First Series.*—Those arranged not only as rest stations but also as stations for providing full meals.

2. *Second Series.*—Those with rest stations only. In these only refreshments are given.

Trains halt for about one hour at each station of either series. The medical officer in charge of the convoy receives a list of the stations and the series to which they belong on the itinerary of the train.

DIETS PROVIDED

There are three diets provided:

1. Repas administratif: This is a full meal, provided at the halte-repas or station of the first series. It is given to all patients and soldiers. If the sick and wounded cannot take the full diet they receive a repas leger.

2. Repas leger: This consists of two articles; one to be selected from among the articles in each of the following two groups:

First Group

Milk	0.40 liter.
Coffee with milk	0.40 liter.
Chocolate, plain	0.25 liter.
Chocolate and milk	0.40 liter with 20 gm. sugar.
Coffee without milk	0.25 liter.
Wine	0.25 liter.

Second Group

Gruyére or Dutch cheese	0.06 kilo.
Cream cheese	0.10 kilo.
Chocolate tablets	0.035 kilo.
Two biscuits.	

Two-fifths of a liter of boullion or soup (thick) may be substituted for one of the articles on the above table.

The Societé de Secours may provide with the repas legers more substantial materials such as roast meat, chicken, etc., but is not entitled to compensation from the government for these.

3. Repas de Infirmarie, *i.e.*, diets given to sick and wounded who may be removed from the train and placed in the ward of the infirmary:

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Bread	250 grammes.
Cooked meat	75 grammes.
Cooked vegetables	200 grammes.
Wine	0.20 liter.

Eggs or fish are regarded as substitutes for meat; beer or cider as substitutes for wine.

The personnel on duty at the infirmary receive each daily one repas leger, 250 grammes of bread in the morning, and two repas de infirmaries. Both the repas administratif and the repas leger are served out to the sick and wounded in the railway carriages. Sick and wounded prisoners are treated, so far as diets and medical attendance are concerned, in the same way as the sick and wounded of the French Army.

The appendices of the regulations governing the French Red Cross give complete details of the material which the society has to keep ready for each infirmary in time of peace, under the following heads:

1. Drugs.
2. Dressings.
3. Surgical instruments and other articles for surgical work.
4. Dispensary articles.
5. Bedding, utensils, etc., for the ward and for the ward orderlies.
6. Kitchen utensils and utensils for serving out diets.

The appendices also contain illustrations of the various forms that are in use in connection with the infirmaries.

The following documents are ordered kept up and submitted as required by the authorities of the railway infirmaries:

Admission and discharge book.
Delivery and receipt vouchers of articles of value.
Register of articles and particulars of deceased patients.
Nominal return of admissions and discharges for five-day periods.
Daily numerical return of admissions and discharges.
Quarterly return of admissions, discharges, meals, supplies, etc.
Monthly return of diets for patients under treatment in the ward of the infirmary.
Telegraphic form of imminent deaths.
Medical transfer certificates (Bulletin de Sortie, Billet d'Hospital).
Death registers.
Extract from death register.
Return of money orders or postal orders belonging to deceased patients.
Return of moneys belonging to deceased patients.
Return of papers, documents and articles of value belonging to deceased patients.

The Societé de Secours aux Blessés has provided the personnel and equipment of 25 auxiliary field hospitals complete, each hospital being equipped for 100 beds.

The personnel of each hospital consists of two doctors and two assistant doctors, one apothecary, one quartermaster, one clerk and seventeen hospital orderlies, paid by the society, but provided by the War Office from men of the Territorial Reserve.

The hospitals mobilized with the army corps to which they belonged.

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They were utilized behind the front, chiefly as rest stations on the lines of communication, but they were pushed up as required to relieve field hospitals, which were temporarily unable to evacuate their sick and wounded. As they have no transport, they were conveyed by train, wherever required, and then secured what country carts that might happen to be available on the spot in event of their leaving the line of railway. Country carts were also used for distributing the sick and wounded to the more permanent hospitals in the vicinity. The Union des Femmes de France makes a special study of the arrangements necessary for converting these carts into suitable ambulance wagons. The equipment of each of these field hospitals is packed in five boxes, nineteen panniers, and six bales, the total weight being 44⅓ cwt.

On the outbreak of war The Union des Femmes de France provided twenty auxiliary field hospitals of 100 beds each, the equipment of which was exactly similar to that of the regular field hospitals, forming loads for four wagons.

Elaborate preparations and details regarding auxiliary hospitals were also published by the War Office.

The places selected for the establishment of these hospitals were:

1. Schools, colleges, boarding-houses, asylums, large hotels, all of which already possessed beds, bedding, kitchen utensils, etc., and which could therefore be readily transformed into hospitals, if their sanitary conditions admitted of their being used for this purpose.

2. Establishments or buildings of any description, which, from general arrangement, situation and size, could be utilized in an emergency. The selection of these buildings was left to the chief surgeon of the districts. Full reports on each were submitted in time of peace, detailing the actual condition of each, and the modifications necessary for its transformation into a hospital.

The authorized number of these hospitals is unlimited and depends entirely upon the number of buildings which the Army Medical Service may select as suitable and for which it can provide personnel and equipment.

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CHAPTER XX

MALINGERING

Not infrequently men seek to evade service by claiming or exaggerating some defect, or after admission, seek to leave the service by malingering. This subject has been well discussed by Upton, Munson, Collie, Pollock and McKellar. Jones & Llewellyn are the authors of a valuable treatise on malingering, recently published. The subject is one of prime importance to both line and medical officers. In this, as in every other field of military endeavor, the keynote of success is discipline. The medical officer should be supported in his efforts to keep troops with the colors. All too often those who refuse to be swayed by personal sympathies and who refuse to excuse men from duty for inadequate reasons are considered cruel and unjust. If, as well may happen, a mistake is made, and an actually sick man is kept on duty, they are made the objects of official censure and their efforts discouraged. In some regiments line officers will without authority, excuse from duty, men whom the surgeon has refused to excuse and will censure the surgeon for his alleged inefficiency or lack of sympathy. It is often necessary to educate the line officers in their duty in this matter. If they are morally weak and gullible, artless, or have a low standard of public honor they will encourage the relief from duty of malcontents well able to perform it, since these are foci of discontent and perennial sources of annoyance. Medical officers may encourage it for the same reasons or from professional incapacity. The prime duty of both is to keep the troops at the front and not to yield to personal or political influence, or a misplaced sympathy. Both line and medical officers are entrusted with a public duty and must not allow misplaced sympathies, weakness, or a low standard of public honor to support claims that cannot fully be substantiated.

How serious this evil may be is shown by Upton's remark in his Military History of the United States. "Malingerers soon become adepts in feigning all manner of diseases. By June, 1862, impositions became so frequent that discharges for rheumatism had to be prohibited in orders. In the last year of the Civil War the number of men absent without authority from the Union Army was more than half as great as the number in the ranks."

These men had escaped from the firing line, a large proportion on frivolous pretexts, leaving their comrades to do their work and endure their dangers and had passed through successive hospitals to their homes and beyond military control.

Malingering is practised to avoid unpleasant or dangerous duty, to secure hospital care and service, to procure discharge with a view to securing a pension, to make as much trouble as possible for those in authority, and

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to outwit them if possible. The chief causes are avoidance of danger and quest of a pension. Before an engagement the number of those seeking excuse from duty, in some services, is tremendously augmented. In the British service the reverse is said to be the case. On a smaller scale, the same condition occurs when any merely unpleasant but not dangerous duty, *e.g.*, a hard march, is in prospect. A successful malingerer promptly has a host of imitators. The reputation of both line and medical officers who are deceived suffers greatly, and their prestige in their commands is impaired. The fighting efficiency of a unit in which malingering is practised successfully, is diminished out of all proportion to the numerical losses caused thereby, for the morale of such a unit, collective and individual, is lowered.

Malingering is most common among newly raised troops, men in the guard house and conscripts. Old soldiers are deterred from practising it less by possible punishment than by their self respect.

Laignel-Lavastine and Paul Courbon distinguish three categories of malingering. (1) Feigned somatic disorders, comprising self-inflicted mutilations or injuries, and self-induced diseases; (2) feigned functional disorders; (3) feigned functional disorders grafted on genuine organic disease. In making a diagnosis the question is whether there is or is not intent to deceive. "This is difficult, because every man's inner life is the scene of so many involuntary and unconscious lies that no one can tell the determinations even of his own actions with certainty. Between the man who is genuinely ill and the simulator there is an insensible gradation. The pure type of simulator is the man whose conduct appears to be solely determined by the deliberate intention of avoiding combatant dangers." What the authors call a "mitigated" type is represented by men whose mental constitution causes a certain lessening of resistance to danger. The pure simulator is without excuse; he is a mere selfish coward. In the mitigated type some allowance must be made for mental constitution. The man is moved by the feeling that he cannot face danger. There are several varieties of this type: (*a*) Emotional, common in those who do not believe in war and are unable to adapt themselves to its conditions; (*b*) the hypochondriac, who thinks his health unequal to the fatigues of a campaign; (*c*) the man who holds that he has a right to claim exemption either because he has done enough or because he considers that he would be more useful in a less exposed post—especially common among those who have been at the front and sent back for some injury or sickness; (*d*) the suggestionable, who simulates at the instigation of his family or friends; (*e*) the simulator by reaction, who thinks it necessary to keep up a morbid condition in order to prove that he has been wrongly charged with malingering. When real disease or injury is made to appear worse than it is by simulated functional trouble the exaggeration is often more or less unconscious.

Under the name of "perseveration" the authors describe feigned disorder following real sickness or injury. In the pure type the patient does exactly the opposite of what is necessary for cure; in the mitigated type the man does not actively keep up his disability but does nothing to get well. In pathomi-

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mia, which is the artificial production of disease—for instance, by inoculation—there is also a pure type in which the patient acts with deliberate intention to deceive, and a mitigated type in which the man while wishing to deceive is also to some extent the victim of his own perverted imagination. There are active, apathetic, and sensitive simulators. To the first category belong men who multiply their devices, and thus increase the risk of detection. Instead of waiting till their fraud is exposed they are eager to prove their innocence, and in so doing stumble into pitfalls made by their ignorance of symptomatology. The apathetic acts by the force of inertia; he awaits instead of seeking investigation, and is content to make a passive show of good faith. The sensitive generally tries to avoid examination but submits readily to treatment. The cause of his simulation is separation from home. He acknowledges that he is not ill, and returns without much objection to his unit, but on the march his courage fails, and he again declares that he is ill and tired of life. He faints on the road, and some more or less moving testamentary document is found on him declaring his determination to kill himself. Though there is much hypocrisy in his conduct, it may be associated with a certain amount of sincerity. So while the active simulator is disliked, and the apathetic becomes a bore, the sensitive almost inspires sympathy. While the pure simulator, the constitutional coward, is always a fraud, the others are simulators only owing to circumstances more or less persistent, but which are always due to some weakening of energy. Many of the authors' patients had behaved well in battle, and even won the Military Cross. Their subsequent failure was due to a change of disposition. Their moral energy, conspicuous at first, became exhausted.

"The malingerer is likely to be surly, he is cautious in his statements, hesitates in answering questions, avoids definiteness as much as possible, prefers not to look you straight in the face and seems constantly to be on guard. It is evident that he does not heartily coöperate in carrying out treatment prescribed, and not infrequently he bluntly states, with evident relish, that the treatment has done him no good. He may excite suspicion by his exaggerated groans and grimaces and may be seen getting ready to make complaint even before he is touched. Unless he has medical knowledge he is prone to deal in a multiplicity of symptoms, all of which could be present in no known malady. He may often be trapped by suggesting symptoms which to him seem natural accompaniments of his disease, but which in fact would certainly not be present. When a man claims to have pain in spots, but has not, he likes to keep his eyes on it, fearing that otherwise he may not be ready to flinch and cry out the instant it is touched. When pain is real and severe, the wincing is reflex and almost instantaneous; but if it is feigned, there is an appreciable interval if he is compelled to look elsewhere, in which he has to make up his mind that facial or somatic contortions and vocal expostulations are demanded. The usual accompaniments of real and severe pain, flushing, dilatation of pupils, acceleration of pulse and insomnia will be absent. If he be compelled to locate definitely a painful area, and this be circumscribed by a red ink line, and later, while

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he looks elsewhere, the procedure be repeated with black ink, his troubles will frequently be found to have metastasized" (McKellar).

A device which apparently could not be expected to succeed except in persons of limited intelligence, has been used in cases of alleged anesthesia of a part.

The patient is blindfolded and instructed to say "Yes" when he feels a prick and "No" when he does not. He will sometimes consistently say "Yes" every time the alleged anesthetic part is attacked. Very often a part said to be exquisitely painful to the slightest touch can be grasped firmly without the patient's realizing the part has been touched, if at the same time his attention is directed to some other part or his mind centered upon a mental problem. This device of catching a patient unawares has a thousand applications. A man who says he cannot bend his back may forget himself and pick up a handkerchief; he may forget that his hand is paralyzed and give you a hearty handshake; though stone deaf, he may hear a coin fall on the stone floor and recover it; he may forget he has a stiff knee and cross his leg as he dresses, if you meanwhile engage his attention by conversation upon a subject of interest. Careful, constant observation while the patient supposes himself unwatched is a measure which will be successful in exposing shams in a large variety of cases, simulation of mental disease being almost sure of detection sooner or later. Obviously, if the malingerer possesses medical knowledge, he is much less easily caught.

In cases of pretended diarrhea or dysentery, be sure the patient is taking no cathartics, and to have him use a bed-pan exclusively.

A treatment which speedily will cure a large number of cases of divers sorts is isolation, in a dark room, with nothing to read, on liquid diet. One day thus spent seems a month and few malingerers can stand it long.

In case a patient is suspected of injuring himself or using some measures to prolong his illness, make it impossible for him to do so, using, if necessary, a strait jacket, or a plaster cast. An obstinate case of conjunctivitis was cured by putting the patient in a strait jacket in a dark room. He speedily confessed he had rubbed his eyes to produce the inflammation.

Etherization, complete or partial, is a measure which will be found useful in a large number of cases. Under it stiff joints, paralysis and contractures may disappear like magic. Muscles which are said to be paralyzed may also be made to contract vigorously by use of an electric battery applied at their motor points.

On attempts to flex a joint which is being held stiff, the opposing muscles will be found upon palpation to be in vigorous contraction. Muscles which have been long in disuse will show wasting. Nerve lesions, if simulated, will be exposed by the usual tests for degeneration. While a patient's mind is deeply engrossed in trying to determine whether or not a weak current is running, as the instrument buzzes, he may submit to vigorous pressure of an electrode upon a spot he has asserted to be exquisitely tender to touch. Or while engaged with deep breathing, he may similarly let the examiner press heavily with a stethoscope upon his alleged most sensitive area.

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In cases of simulated paralysis, pain or anesthesia, fraud may be suspected if the area affected corresponds to the distribution of no nerve, and to the area of no other structure.

Many cases, that formerly were difficult or impossible to expose, are now readily disposed of by use of radiographs.

In suspicious cases, full and accurate histories, with good notes, will often be found to disclose glaring discrepancies of statement in subsequent examinations.

Some form of mental disease is frequently simulated. The form which this alleged illness takes is determined by the caprice or predilection of the patient. Usually it is paranoia or melancholia. A correct diagnosis is sometimes very difficult and is largely determined by the reports of the patient's attendants who see him so much more frequently than does the medical officer that (if their sympathies be not enlisted in the patient's behalf) their testimony is of much assistance in the obtainment of a correct diagnosis. Various expedients are employed to detect these impostures. Usually they take the form of appearing to humor the patient until he commits himself. Conversations are sometimes held in the patient's hearing for the purpose of giving him false impressions that certain symptoms are characteristic of the disease the patient is thought to feign, and notation is made whether he attempts to manifest these symptoms. Epilepsy is often simulated. A diagnosis may be reached by pouring a bucket of cold water over the patient's head after each pretended fit, or by pressure on the supra-orbital nerves. If a hypothetical but false symptom of epilepsy be mentioned in the patient's presence, he often will simulate it.

War-neurosis, popularly but erroneously called "shell-shock," is a psychoneurosis which has received increasing attention as the war has progressed. It is due to congenital deficiency, nervous strain, anxiety, etc. Some cases are genuine, but more are simulated, many of the latter innocently. Most soldiers erroneously believe that this condition is always due to concussion, whereas in point of fact, this is but a contributing cause. As Prince indicates it is a form of hysteria, and is caused rather by fear than by trauma especially among those who are in a state of terror during a bombardment. A large portion of the cases can be prevented by instructing the troops concerning the real nature of the ailment. The detection of those simulating it, sincerely or insincerely, often requires the services of a specialist. M. W. Eder's work on War Shock, and to a less degree, Jones' & Llewellyn's work on Malingering, give valuable information on the subject.

Simulation of minor affections of the nervous system (such as headache, giddiness, vomiting, diarrhea) is well met by the use of nauseous drugs. A prescription used in the British service in such cases is given below. Care must be exercised that the patient actually takes the medicines prescribed.

Neurasthenia is frequently seen in this war. Also it is often simulated; sometimes quite innocently. In this disease there may be much unconscious self-deception.

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In the examination of men claiming exemption from military service it becomes very important to know the exact degree of hearing in the individual case. Many will claim deafness when in fact the hearing is practically normal, and unless the examiner is very astute a candidate gifted with a fair degree of histrionic talent may be rejected although physically fit in every other respect. A recruit may be quite honest in his belief that his hearing is permanently impaired, when the removal of a mass of inspissated cerumen will fit him for service. There is often a history of otalgia since childhood without visible signs of old scars in the drums. Such cases must be studied with care, for a patient may be totally deaf with a drum that looks normal, or on the contrary may have a good degree of hearing when the drum is almost totally destroyed. In the former contingency, the causes commonly met with are degeneration of the cochlear nerve after an acute infectious disease such as meningitis where the middle ear itself escaped infection or degeneration due to chronic constitutional disease such as syphilis. There are many cases of syphilis that have been treated with arsenical preparations which are complicated by a neurorecidive in the nerve of vision or hearing. Such deafness usually comes on suddenly, not uncommonly in the morning when the patient arises, no sign of its presence having been manifest on the previous day, or it may come on gradually over a period of one year or more. This type is absolutely incurable.

Apoplectiform types are also to be noted such as those which follow embolism or fracture of the skull through the labyrinth. The falling tests which have been applied in work with the Exemption Board are not new, but are probably not widely known in America. Every specialist who has studied otology in Vienna has seen them demonstrated, or has applied them himself while working in the various clinics. In Austria there are, or rather were a great many requests for exemption from military service because of partial or absolute deafness, and it therefore became necessary to weed out the malingerers from those actually unfortunate.

Memorandum No. 5, Office of the Surgeon General, U.S. Army, dated Aug. 22, 1917, on the Aural Examination of Drafted Men at National Army Cantonments reads as follows:

1. To determine the acuity of hearing, see Regulations Governing Physical Examinations, Form No. 11, P.M.G.O., page 5, section (K), "Hearing." (See chapter on Recruiting.) All doubtful cases are to be referred to the special examiner.

2. The minimum of hearing which permits acceptance is as follows: With both ears open the hearing should not be below $^{1}\%_{0}$. One ear may be completely deaf but the other should have one-half normal hearing, that is $^{1}\%_{0}$. In all cases of lowered hearing, the presence of impacted cerumen should be excluded. Refer such cases to the special examiner.

3. The aural conditions which disqualify the recruit are as follows: Any aural discharge. The membrana tympani may be much retracted and thickened. If, however, the total hearing is one-half normal, $^{1}\%_{0}$, the recruit should be accepted. The membranum tympani may be perforated.

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If the ear is dry and the total hearing one-half normal, 1⁰⁄₂₀, the recruit should be accepted. The membrana tympani may be practically absent. If the ear is dry, and there are no such symptoms as nystagmus, nausea, vertigo or headache, the recruit should be accepted. As before, the total hearing should be at least one-half normal.

4. Cases suspected of malingering should be referred to the special examiner. The following tests for feigned deafness or malingering are suggested:

(*a*) The Wagner Malinger Phone is believed to be the best instrument for detecting feigned deafness. The instrument consists of a funnel which receives the sound. This is connected with a flexible tube, which again is connected with a "Y"-shaped metal tube. On each of these bifurcating ends another flexible tube is attached, into the ends of which are inserted two funnels sufficiently large to cover the entire external ear. The length of the instrument is at least two (2) meters in order to exclude the hearing by air conduction of sound external to the instrument. The method of making the examinations is as follows:

The man who is to be examined holds the metal ear pieces tightly over each ear, and is directed to close his eyes during the examination. An assistant stands behind and grasps the tubes to the ear pieces, holding one in each hand, ready at a sign from the examiner to stop off the tube to the right or to the left ear by pinching it tightly. The examiner also stands behind the recruit. The examiner holds the funnel or mouthpiece and whispers into it such numbers as 77, 66, 54, and short sentences. If the man who is being examined has normal hearing he hears what is whispered into the receiver equally well in both ears. In order to detect malingering the examiner nods to the assistant to close the tube which leads to the good ear. If the man who is being examined repeats correctly what is whispered into the receiver, he is hearing with the ear which he claims is deaf. It is necessary that the assistant pinch the tubes without jarring, otherwise the motion is communicated to the excluded ear, and in this way may give the recruit a hint of the working of the test.

(*b*) Another test is to exclude the good ear by having the assistant press the tragus of the recruit's ear inward. The examiner then presses firmly below the tip of the mastoid process of the good ear until the recruit flinches. Then the examiner says, "If you will open your mouth it will not hurt you." The recruit usually opens his mouth. If he does so, he is feigning deafness.

5. The Wagner Malinger Phone will be supplied to each base hospital.

Other tests are the Stenger test and the reading test:

The Stenger test depends upon the following principle: Two tuning forks of exactly the same size, pitch, and amplitude are set in vibration; one fork is held an inch away from the right ear. When the other fork is brought up to the left ear, the fork at the right ear is no longer heard by a person who has about the same degree of auditory acuity in both ears. To test a recruit who says he is deaf in his left ear, set the forks vibrating by striking one against the other. Hold one fork in front of right ear. It is

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heard of course. Then bring up the other fork toward the left ear and ask if the fork at the right ear is still heard.

If it is not, then the left ear is functioning; if it is heard the left is not functioning. In a normal case the sound of the vibrating fork will not be heard by the right when the left fork is approximated or *vice versa*, as has just been explained. The contingency of two deaf ears does not often present itself with malingerers for there is always plenty of evidence from friends or acquaintances that the examined man heard before coming up for examination. A satisfactory test in such cases is to line up the malingerer with a number of other recruits known to possess good hearing, and when their undivided attention is obtained, say in an ordinary voice, "All those who are deaf will now be excused from the service." Taken off his guard the malingerer will inadvertently drop out of the line. Or one may say, "Do you expect that your brother will be exempted too?" In his anxiety the candidate is sure to make some answer.

Another exceedingly valuable test is the so-called reading test. If a normal person is asked to read aloud continuously and suddenly has the sound of his own voice excluded by two noise apparatuses, he will unknowingly raise his voice almost to a shriek. Suppose he claims a severe degree of deafness in his right ear. If he is asked to read aloud and the noise apparatus is set going in his left ear, the voice will be raised if the deafness is real; and if not, there will be no change in loudness or pitch. This test requires the Barany noise producer (larm apparat), to be carried out effectively (The New York Medical Journal, Aug. 18, 1917).

Another plan is to place a paper funnel in each ear and cause two people to whisper into them at once. The patient is then told to repeat the words he has heard. If he repeats even one word which has been whispered into the deaf ear he must have heard with it.

G. Gradenigo says that artificial lesions of the ear are common. Purulent otitis is simulated by the introduction into the ear of substances resembling pus (honey and milk, soft cheese, clotted milk, putrefied yolk of egg, juices of various plants); polypus is simulated by means of the viscera of small animals. These frauds are easily detected by the speculum; if there be any doubt, the nature of the foreign liquid will be shown by microscopic examination. As a rule, the affections produced artificially are suppurations; much more rarely the lesion is a perforation of the tympanic membrane. It is easy to set up suppuration of the ear; owing to the thinness of the lining integument, even simple irritants may cause more or less deep lesions, which are liable to suppurate. The cases are divisible into two groups according as the membrane is intact or already perforated as a consequence of an old cured otitis media. In the latter case, when there is more or less extensive dry perforation, the delicate mucous lining of the tympanic cavity is directly exposed to the irritant action of external agents; the instillation into the meatus of a slightly irritant liquid will cause reinfection of the middle ear—a true acute purulent otitis clinically indistinguishable from the real affection.

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Usually there is no perforation, and then the lesions vary with the nature of the agent used and the site of application. Various solid agents are employed, such as cantharides powder, blistering plasters, small rolls of paper impregnated with irritating soap, etc. Powders made of tiny fragments of skin from horse combings are very irritating and form a favorable medium for the development of aspergillus or other mycoses. If the caustic is powerful (concentrated mineral acids or boiling liquid) the membrane is perforated and sometimes destroyed; serious changes are produced in the walls of the tympanic cavity, in the labyrinth, and the facial nerve. Such lesions, however, are seldom seen in soldiers who know the pain of the manoeuvres required to produce them and the risks they entail. In the majority of cases moderately caustic substances are employed and only a diffuse external otitis is produced. In the present war gasoline, which is easily procured from automobiles, is much used. Among other agents are turpentine, croton oil, dilute acids and alkalis, or perchloride of iron. Irritant vegetable juices are in common use; less frequently tobacco juice or match-heads are employed. In the other group, which is perhaps the more numerous, otitis is produced not by instillation but by the application of caustics to the orifice. This causes ulceration, the lesions being fairly regularly arranged around the meatus, and extending for ½ to 1 centimetre on the walls of the cartilaginous part, and also involving the concha and the tragus. They do not reach the deeper parts of the meatus or the membrane. This, says Gradenigo, is a point of the utmost importance. In slight cases there may be only transient superficial ulceration. A characteristic feature is that the surface is at first covered with a whitish pulpy mass, consisting of macerated epidermis and pus; this is very adherent, and its removal lays bare an ulcerated surface, which bleeds readily. If the caustic action has been severe a whitish eschar forms, which separates many days after the injury, exposing the deep parts of the derma and sometimes the cartilage. In that stage there is more or less violent inflammatory reaction of the adjoining parts of the walls. Suppuration occurs, and later granulations, which grow inward and quickly tend to block the lumen of the meatus. If left to themselves the lesions give rise to stenosis and even complete obliteration of the passage.

The patient always says that he has had inflammation of the ears since childhood and that the disease has been stirred up into new activity by wet, cold, and fatigue. At first the process is accompanied by evening fever of moderate intensity. In the early period diagnosis is easy as the lesions in the external meatus and pinna are characteristic. An eschar consisting of a grey, dry adherent substance lines the outer and inferior part of the meatus all round.

The eye examiner of drafted men especially must be on his guard; test cards must be constantly changed and the applicant must be made to call quickly, letters in various positions on the cards. It is easy to memorize the lines on ordinary test cards and pass the memorized letters on to others. For this reason the international test card should be used. If the same

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card of the usual type, commonly employed is used daily, the vision test from this alone is unreliable. On the other hand, an apparent defect in vision must not be accepted until proved by the retinoscope or ophthalmoscope. Another fraud frequently attempted is substitution, where one applicant will temporarily change places with another or will even appear under the name of a comrade. The preventing of this fraud must be accomplished through supervision by the company officers and by severe and prompt punishment when detected.

The following visual examination of drafted men is prescribed in Memorandum No. 4, S.G.O., Aug. 22, 1917.

On the visual examination of drafted men
at National Army Cantonments.

1. For visual requirements see Form 11, P.M.G.O., Par. 2 (*i*) and (*j*) in the chapter on Recruiting.

2. For method of testing vision see Form 11, P.M.G.O., Par. 2 (*i*). The test card must be well lighted (same chapter).

3. In testing vision, when doubt exists as to the ability of the individual to read the test letters, he will be referred to the special examiner for malingering tests.

4. The lids of every individual selected by the draft will be turned for the purpose of determining the presence of trachoma. All suspicious cases will be referred to the special examiner.

5. Malingerers who wish to evade military service may be divided into two classes as follows:

"A"—Those who claim total loss of vision in one eye.

"B"—Those who claim partial loss of vision in one or both eyes.

Either group may have a normal acuity of vision or may exaggerate a defect actually present.

6. In testing for malingering the medical examiner should bear in mind that detection is more likely to result when the man is allowed to believe that his case is regarded from the first to be genuine and that his story is not discredited. There is something indefinable in the bearing of the malingerer which experience alone can detect. He may be self-assertive and overconfident; he may be hesitating or evasive. Careful observation should be made of his conduct and every movement noted. The nature of the man's answer should be taken into account and considered in the light of the kind of reply that is given when a genuine refraction case is being dealt with.

7. The following equipment will be supplied:

(*a*) Trial frame; 1 blank; spherical lenses, +16, +3, +0.25, −3, −2, −1, −0.25 (to be found in regular medical corps equipment).
(*b*) Two prisms, one 6°, one 10° (in regular equipment).
(*c*) Ophthalmoscope, electric (battery in handle).
(*d*) Condensing lens.
(*e*) Loupe.

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(*f*) Red and green letters on glass: (*a*) letters varying in size; (*b*) spectacle frame containing red and green glasses.
(*g*) Special test cards, one a duplicate, with letters reversed to use with a mirror.
(*h*) Mirror large enough to reflect test card.
(*i*) One stereoscope with special cards.
(*j*) Retinoscope (electric, with battery in handle).
(*k*) Ruler, about one and one-quarter inches wide.

8. Class "A," total loss of vision in one eye.

(*a*) A 6° prism base downward is placed before the admittedly sound eye, while the man looks at a distant light or candle; if he sees two candles, binocular vision is proved. The examiner may vary the test by placing the prism before the "blind" eye, either base up or base down.

(*b*) A prism of 10° with base outward is placed before the "blind" eye. If there is any sight in this eye, double vision will be produced and the eye will be seen to move inward to correct it and fuse the two images.

(*c*) The alleged "blind" eye is covered. A prism of 10° with the apex up is placed before the seeing eye in such a position that its edge lies horizontally across the center of the pupil. This produces monocular diplopia. The prism is then moved upward so as to be completely in front of the good eye and at the same time the "blind" eye uncovered. If diplopia is produced or admitted, there is sight in the "blind" eye.

(*d*) *Test with Colored Glasses and Letters.*—This consists in directing the individual to read a row of red and green letters through a red and green glass. The red letters will be invisible to the eye that has the green glass before it and *vice versa*, but if all the letters are correctly read irrespective of their color, there must be sight in the "blind" eye. Further, the smallest letters correspond with the $^{20}/_{40}$ test letters and if read at twenty feet indicate vision up to standard. To determine this, reserve the glasses and direct the letters to be read. As these letters are seen by transmitted light, the proper illumination back of the chart must be observed.

(*e*) *Test with Trial Glasses.*—A high plus glass is placed before the good eye and a low plus or minus before the "blind" eye. If the distant type is read, the vision in the "blind" eye is good.

(*f*) *The Stereoscopic Test.*—This may be made with ordinary stereoscope, the printed matter so arranged that certain portions of it are not present before one or both eyes.

(*g*) *The Bar Test.*—Interpose a ruler about one and one-quarter inches wide vertically midway between the two eyes at about four to five inches distance; direct the man to read from a printed page with lines at least four inches long. If able to read the lines, binocular vision exists.

(*h*) The action of the pupil must be carefully tested, there usually being no movement to light stimulation when the eye is blind.

9. If the examiner is not satisfied, the following examination should be made:

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(*a*) *Oblique Examination.*—A careful examination of the cornea should be made with the aid of a condensing lens and loupe.

(*b*) *Ophthalmoscopic Examination.*—A searching examination with the ophthalmoscope should be made, together with an estimation of the refractive error. The pupil should be dilated if necessary.

10. Class "B." The most common manifestation of malingering takes the form of a statement that one eye is imperfect. Men pleading this disability may be divided into two classes:

(*a*) Those who pretend to have a visual defect.

(*b*) Those who are aware that they have a visual defect and exaggerate its effect.

No hard and fast tests can be prescribed for the detection of these cases. Much depends on the alertness and ingenuity of the medical examiner.

The tests with prisms are not applicable here, for there is not pretended blindness in one eye, but simply an alleged diminution of visual acuity.

11. Class "B." Partial loss of vision in one or both eyes.

(*a*) *Mirror Tests with Special Test Cards.*—(See paragraph No. 7.) Test cards are used which are identical, one having the letters reversed. The recruit is directed to read the letters on the chart across the room, and then in a mirror beside it, which reflects reverse letters that are placed over his head. The letters seen in the mirror are located double the distance of the direct letters from the man being examined. The malingerer is apt to read in the mirror the line which he read on the first card, showing that his vision is twice as good as he pretends.

(*b*) *Trial Frame Test.*—Place a trial frame upon the man's face and put before the sound eye a high convex lens (+16D), and before the "blind" eye a plane or weak lens (+0.25), which will not interfere with vision. If letters placed at a distance of 20 feet are read, the fraud is at once exposed.

(*c*) *Oblique examination* with condensing lens and loupe to determine corneal or lenticular opacities.

(*d*) *Ophthalmoscopic Examination.*—It is probable that the malingerer will resist the ophthalmoscopic examination by frequent winking or rolling of the eyes. In this event it is best to caution the man that a report of his vision must be made, and then to postpone further examination until after the next few recruits have been examined.

(*e*) *Estimate the Refractive Error with the Use of the Ophthalmoscope.*—If no error of marked degree exists and the media and fundi are normal, the relation between the alleged vision and the refractive condition furnishes an important clue. If the error is about +4.00 or −2.00 the visual acuity could be about $^{20}/_{100}$, but when the defect cannot be accounted for objectively and the vision is brought from $^{20}/_{100}$ to $^{20}/_{50}$ or $^{20}/_{30}$ by means of a low plus or minus glass, the man is malingering.

(*f*) *Retinoscopy.*—Look for corneal and lenticular opacities and estimate refractor errors.

12. *Occupation.*—The man's occupation in civil life may have been

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such that it could not have been followed without more vision than he claims.

13. In the absence of ocular defects, continuous and persistent blepharospasm, the use of colored glasses, eye shades or eye bandages should be regarded with suspicion.

14. *Diplopia.*—Cases of malingering are occasionally met with in which the man complains he sees double. These must be investigated with the application of the ordinary tests as if they were genuine, with every precaution taken to guard against a serious lesion being overlooked.

Feigned defects of vision are common and sometimes difficult to detect. Claims of such appear periodically and often are made the excuse for actions attributable to stupidity or deficiency in character.

One means of detecting such a malingerer in the English service is the following: He is made to read the test types as far as he can, and then if he pleads short sight a −0.2 lens is inserted in the frame and he is made to read somewhat further, if possible. Next a +0.2 lens neutralizing the former one is applied and the suspect is urged to read further. If he does so he must be a malingerer. Another method is to cause a man to read types as far away as he can. A mirror is then placed where the types stood and a set of reverse types set beside him. If he can read the reflected types he must be a malingerer as the distance of the line of sight is now twice as great as it was before.

Unilateral defective vision can also be tested by using an instrument improvised by making a hole ½ inch square in a piece of paper. This paper is held about a foot from the man's eyes and about 4 inches in front of another paper on which the numerals from one to five are distinctly written. These he is told to read. The effect of the diaphragm, *i.e.*, the piece of paper, with the hole in it, is to make the man see the numerals by crossed vision. The right eye sees the left half of the line of numerals, the left eye the right half of them.

Sir John Collie gives a number of useful suggestions for detecting blindness or amblyopia. Blind eyes, he says, are usually moderately dilated. A man reading very poorly without lenses, may read normal with a plus and a minus that exactly neutralize each other. A malingerer who claims to be entirely blind will not look toward his hand when told to do so. A man continues to read from a book when you hold a pencil before his nose, if he sees with both eyes, since each eye sees the words that are shut off from view of the other by the pencil. The malingerer will become confused and fall into inconsistencies if the distances and sizes of type be varied. If one eye is blind, a man can only after long practice thrust a pin through a hole in a card. By means of having a patient look through the edge of a prism, a monocular diplopia is produced, and he may thus be confused as to the number of images he should see, and presently confess to seeing two images under such conditions that one must have been that of the supposedly blind optic. (See above.)

If a weak prism be placed over a supposedly sightless eye, and over it an

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obturator, and the patient be set reading aloud, he will, if he really sees with both eyes, be compelled to pause for a moment to fuse the two divergent images when you remove the obturator. Stereoscopic pictures with description on only right or left half furnish a trap into which the unwary fall. The malingerer will often be caught shutting first one eye and then the other to determine what is seen with the good and what with his "blind" eye. Another device is to print a number of letters in a row, alternately in black ink and soft red pencil. Place a deep red glass over the eye which the suspect says is good, and tell him to read the letters. If he reads the red ones it is because he sees with the supposedly blind eye.

Another test prescribed in Memorandum 4, quoted above, is afforded by the fact that a red glass neutralizes a green one, and renders an object looked at through both invisible. On a test card the word "Friend" is printed in large type, the letters F.I.N. in green and the R.E.D. in red. A red glass is placed over the sound eye and a green one over the alleged defective eye. If when the man is asked to read the letters he reads them all he must be using the defective eye as the sound one can see only the letters R.E.D. in red type. Or a red glass may be placed before the good eye, and if the subject can see the red letters it must be that he does so with the alleged defective eye.

Van Schevensteen says there are two types of artificial conjunctivitis—one produced by powdered ipecacuanha, the other by agents of very various kinds which produce anomalous lesions. The introduction of ipecacuanha causes intense injection, with chemosis; there is only slight secretion. The eyelids are much swollen, especially about the lower cul-de-sac in which the irritant is generally placed. The reaction subsides in a few days, but the mucous membrane long retains the salmon tint that reveals the origin of the lesion. Subsequent applications are better tolerated whilst producing still more characteristic appearances: considerable thickening of the conjunctiva of the lower cul-de-sac, salmon tint, blurring of vascular outlines. Lastly, ectropion with lacrymal stasis supervenes. If the applications are repeated these phenomena persist for a long time. In view of the well marked character of the inflammation it is unnecessary to seek for ipecacuanha with the microscope.

Complete recovery is the rule when the application of the irritant is discontinued. Further treatment by cold compresses, and an occlusive collodion dressing is all that is required. In the case of other agents used to produce conjunctivitis the duration and abnormal course of the affection should arouse suspicion.

The other clinical signs suggestive of an artificial origin are, almost unfailing onesidedness, frequency of eczematous lesions about the external commissure and the lower lid, predominance of the lesions in the lower part of the conjunctiva, refractoriness to treatment, especially if the patient is not kept under close supervision, scantiness of the secretion, total or almost total absence of pathogenic germs in the secretion, and the military antecedents of the patient.

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If ocular disease be simulated by infusion of tobacco, sand, powder or ash of castor oil bean, the lesions with which the men present themselves are slight edema and reddening of the eyelids, with muco-purulent discharge. The conjunctiva of the lower lid is hyperemic and thickened, with whitish-gray false membranes, which on removal leave superficial loss of substance, some chemosis, and a notable diminution of transparency. Generally nothing of this kind is seen on the upper lid, and this limitation of the process with the formation of small sloughs on the conjunctiva of the lower lid is characteristic. Very slight eczema in the periorbital zone is common. The voluntary injury is often grafted on a true chronic conjunctivitis, distorting its characters, and making the diagnosis difficult. The course of the affection is very rapid. The symptoms subside in six or seven days, leaving, however, small whitish cicatricial striæ on the lower lid. Very often the fraud is repeated when recovery is almost complete, and sudden relapses, with violent exacerbations, take place without apparent cause. If this is continued, the conjunctiva of the upper lid becomes hyperemic and thickened, and shows small granulations. The treatment is the same as that of ordinary conjunctivitis; sometimes a few applications of a simple lotion are sufficient. As a precaution against repetition starched bandages may be placed over the eyes, sealed and signed. More than anything else, however, strict supervision of the patient is necessary.

Dumbness or loss of voice or chronic hoarseness is sometimes simulated. The deception is often detected by a sharp pin prick, a galvanic shock, or a bucket of cold water thrown over the patient when he is in a hot bath. An old practice is to order in the man's hearing a number of delicacies but secretly to countermand them and to order straight milk diet and then ask the nurse daily in his presence if the patient enjoys the special diet. If the nurse obeys instructions and giving only the milk ordered, describes the patient as enjoying the extra diet greatly, the latter may temporarily forget his simulations.

Another method is a consultation in the hearing of the patient but apparently in ignorance of his presence. The medical officers discuss the necessity of an operation. In this consultation the alleged dangerous character of the hypothetical operation contemplated is dilated upon, and an agreement reached that the patient be asked for his consent and the operation must be performed as secretly as possible. The exhibition of surgical instruments may lead to confession of fraud.

Voluntary starvation is rare. A progressive loss of weight with occasional diarrhea is sometimes caused by the usage of magnesium sulphate early in the morning.

Venereal disease may be contracted or deliberately aggravated in order to escape duty. Gonorrhea has been simulated by injecting condensed milk into the urethra; syphilis by burning the foreskin with a lighted cigarette.

Pyrexia may be simulated by squeezing the bulb of the thermometer, rubbing it on a blanket or other surface, putting it into the mouth already holding hot water, etc.

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Pains in the joints and muscles are often complained of. If simulation be suspected these pains may be treated with blisters, the Paquelin cautery, aqua-puncture, etc. Though these methods are painful they are very beneficial if an arthralgia or myalgia actually exist. In all such conditions much latitude must be given the patient's statements but discharge on account of rheumatism should not be recommended except in cases where the existence of that disease is indubitable. Such cases are extremely rare. A claim that rheumatic pain persists after morphia has been given to the limit of tolerance, or that pains in the legs persist after spinal injection of novocain, is warrant for conclusion that the patient is malingering.

In this connection the great rarity of rheumatism in the western war zone should be noted.

Hemoptysis and hæmatemesis are simulated by making a minute laceration of the mucous membranes of the mouth and after a prolonged fit of coughing, expectorating the blood sucked out. Dyes, brick dust, etc., have been used to discolor the expectorate or feces. The microscope discovers the fraud. In some cases a man has obtained animal blood and either swallowed it and vomited it up again, or passed it in his stools or mixed it with them. Such cases are difficult to detect unless the supply of blood be cut off or facilities for an examination of the blood be available.

Edema is sometimes produced by tying an elastic band high up around a limb and leaving it on for the night, but a trace of the constriction is usually discoverable if looked for. Sometimes the pulse is slowed or made intermittent by compressing an artery higher up on the limb or by placing some foreign body in the sleeve of the garment so that the limb can be pressed against it.

Jaundice is simulated by taking a 5-grain capsule of picric acid followed perhaps by another a few hours later. In from six to twelve hours typical jaundice appears lasting from one to two weeks. The deception is detected by the fact that the stools retain their color and the urine gives the reaction for picric acid.

Bruises or gangrene may be feigned by binding tightly to the skin over night a copper coin that has been soaked in vinegar for some days. If the bandage be kept moist the stain is diffused. Its true character is soon apparent, but if well applied it may save the malingerer a long march.

Variola may be simulated by puncturing the skin in many places with a needle carrying croton oil. Tartar emetic is said to have the same effect. A diagnosis is sometimes difficult unless the case can be followed. It is usually determined by the greater degree of constitutional reaction in smallpox and by the localization of the pits.

In most cases of artificial extensive lesions, the local symptoms which are sometimes severe, contrast strongly with the absence of a general reaction. Erythematous eruptions may be caused by rubbing the skin (usually of the face) with juice or oil of the seeds of ranunculaceous or euphorbaceous plants. If applied to the scrotum the erythema may become eczematous. Artificial eruptions may also be caused by caustic substances.

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These lesions are classified as follows: Pustular forms of dermatitis, edemas, factitious ulcers of the legs, and sham mucous patches. Of these, pustular dermatitis is the most common. The elementary lesion is a pustule varying in size from a pin's head to a millet seed; the skin around is healthy or may be slightly inflamed. The pustules are usually fairly abundant but gathered together into two or three patches. These patches are almost always situated on the hairy parts of the face, often on the ears and neighbouring parts, or on the front and left surfaces of the thigh. An important diagnostic point is that the pustules are all in the same stage of evolution, the whole process taking four or five days. For the production of these eruptions croton oil and thapsia are chiefly used. Artificial phlyctenular dermatitis is not common, as it is too easily recognized; the lesions are true blisters. The men do not usually present themselves till the phlyctenulæ have shrunk, leaving inflammatory lesions. Sometimes they come in the stage of desiccation and the lesions suggest burns of the second degree. But the patient will not admit any history of burning, and by insisting that the affection came on of itself he excites suspicion. Bullous dermatitis in a stage that might simulate pemphigus is rare. These eruptions are produced by blistering fluids, and the man as a rule aggravates the lesions into true sores. Eczematoid dermatitis is usually seen on the face; the eyelids are generally affected, less frequently the thighs and groin. The skin is red and edematous, the eyelids often so puffy as to close the eye. Cases of this kind are often sent to hospital with a diagnosis of erysipelas. But the absence of fever and malaise, and of enlarged glands under the jaw or pain on pressure of the patch, makes this diagnosis untenable.

The lesions subside in four to six days; the skin quickly becomes quite normal, without any trace of branny desquamation or gloss. But this kind of artificial eruption is difficult to distinguish from dermatitis produced by accidental contact with an irritating substance. The malingerer, however, never reveals the nature of the substance used, and Milian in his discussion of this subject states that he has never succeeded in identifying it; he has heard, however, that the lesion can easily be produced by rubbing the face or forearms with automobile oil.

Artificial ulcers are difficult to recognize. The man comes with a history of an injury which has broken the skin. The sore shows no tendency to heal in spite of careful dressing for many weeks. Its refractoriness then excites suspicion of syphilis, and appropriate treatment may be employed for three months without result. Milian lays down the principle that such obstinate sores in young men properly treated may, in the absence of special conditions, be regarded as artificial. They are generally situated on the legs at places within reach of the patient's right hand. They are never at the seat of election of varicose ulcer, the lower third of the leg, especially above or behind the internal malleolus. New ulcers appear, the mode of onset serving to indicate their origin. They are caused by a blistering substance or a caustic agent. Though the Wasserman test is often of value the diagnosis from gummatous ulcers is occasionally difficult because some-

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times the malingerer is a syphilitic who has in the course of treatment acquired a knowledge of this disease, which he is clever enough to apply for the purpose of deception. Artificial ulcers have also to be distinguished from the chronic ulceration following ecthyma or infected wounds. In artificial sores which are constantly under the action of caustics there are no granulations. Varicose ulcers, with their pigmented or eczematoid border and their dull, smooth base, have no resemblance to artificial eruptions. A valuable aid to diagnosis is an occlusive dressing; it is sufficient to keep the sore out of the patient's reach for a fortnight. Collodion is the best application for the purpose, but as the retained pus may cause complications, the doctor should himself put on the dressings, sealing up the ends, or keeping a watchful eye on the bandages, after carefully noting the turns and manner of fixing; in this way it will be seen whether it has been undone. Another diagnostic device is to induce the patient to give himself away by producing fresh eruptions.

The doctor, on examining the original lesion, says in the man's hearing, "I am surprised that there are not similar lesions five or six centimeters lower, as I have always seen in such cases during the war." Next day lesions may duly appear in the place indicated. Artificial mucous patches are produced with the lighted end of a cigarette. They are generally narrower than a cigarette, as the whole end is seldom applied. The lesions are on the left side, and situated on the inner surface of the lower lip not far from the commissure, in the cheek, or on the velum, never on the pillars of the fauces or the tonsils. They consist of rounded, shallow ulcers with a smooth yellowish base, without inflammatory border, raised papules, or surrounding leucoplasia; these features are important in excluding syphilis. The second group of artificial eruptions range in degree from superficial erythema to grave necrosis. When produced by caustics in solution, they may be disseminated in large patches over large surfaces; occasionally they are true burns caused by boiling water or lime. Others occur in the form of sharply circumscribed bullæ and phlyctenulæ, or patches of cutaneous necrosis. For the most part they are localized on the lower limbs, either because those parts are easily accessible or because injuries in that situation need rest. The bullæ and phlyctenulæ have sero-fibrinous and sero-hemorrhagic contents, and form adherent crusts; the underlying derma either becomes covered with epithelium beneath these or heals by granulation when the crust separates. The sloughs from cauterization of the third degree are thicker and more adherent to the derma or subcutaneous tissue; they separate very slowly, and the sore heals by granulation.

Professor Attilio Ascarelli says that among the most common forms of lesions inflicted on themselves by Italian soldiers are abscess and phlegmon produced by injections of gasoline, turpentine, benzine, chloride of lime in benzine solution, etc. The parts selected are particularly the lower limbs, most commonly the calf, the instep, and sides of the knee; not infrequently abscesses are seen on the buttocks. Most often the patient presents himself shortly after the injection, and ascribes the swelling to a fall with

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twisting of the knee or foot, or to contusion from a blow on the knee, or to a therapeutic injection. His general condition is good, the temperature is very slightly raised, and the pulse is all but normal. In a few days, even if the abscess is not opened, the temperature falls and remains low, even in the evening.

There is always slight albuminuria without casts but with a few well-preserved red corpuscles. For two or three days the affected part remains red and slightly edematous; there is no fluctuation, but a doughy feeling on palpation, and sometimes emphysematous crepitation. Local pain is slight. There is no accompanying lymphangitis or lymphadenitis, unless septic complications occur, as they do not infrequently. Nor is there ever any ecchymosis or solution of continuity. After a few days the redness increases and tends to become cyanotic; tension is more manifest; there is no fluctuation, but a peculiar feeling of colliquation. The swelling is quite circumscribed, with sharply defined borders; the skin tense and glazed. By exploratory puncture a few droplets only of blood-stained pus can be withdrawn. In slight cases the swelling subsides, and in ten or twelve days all becomes normal; on the other hand, in grave cases the skin becomes more tense and more glossy, and there is a tendency to ulceration. Incision, which even in moderate cases should be performed early, gives exit to a very scanty amount of pus and well-preserved liquid blood, with which are mixed many necrotic fragments of subcutaneous tissue, muscle, and even fascia. After incision inspection will show that the tissues are dissected along the intermuscular spaces. In the great majority of cases the affection runs a favorable course. Sometimes, when much of the irritant substance has been used, the tissues are extensively stripped up between the muscular bundles. Even in such grave cases general complications are not frequent and lymphadenitis is rare. Sometimes recovery is much delayed owing to great loss of tissue, and many patients lie in hospital for many months; sometimes they remain partially disabled. The lesions do not differ much whatever the agent used, but they are particularly severe when produced by gasoline. Detection of the cause may be very difficult. Sometimes, on opening the abscess, a fecal smell is perceived, just as the odor of turpentine or gasoline may be detected in the previous cases, and the presence of a red raised point may mark the track of the needle. Complete recovery takes place only after several months. When injections of fecal matter mixed with gasoline or benzine are used, the symptoms due to the chemical agent predominate; hence diagnosis is more difficult.

Ascarelli deals at some length with self-inflicted lesions caused by chemical caustics. An excoriation is produced by friction and then a strongly concentrated mineral acid or alkali is applied for some time. The agent most frequently used in his experience was soda or potash lye, sulphuric or hydrochloric acid, more rarely chloride of zinc. By the application of these substances an eschar was produced the origin of which is recognized without much difficulty. The places selected were the dorsum of the foot, the

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back of the hand, and the front of the leg. The patient generally attributes the affection to a contusion caused by a heavy object falling on his foot or the blow of a hammer on his hand. His general condition was excellent, and neither general inspection nor examination of the urine reveal anything (syphilis, diabetes, syringomyelia, varix) that explains the formation of eschars. The lesions were single or multiple, definitely circumscribed, more or less circular, with sharp margins, sometimes festooned, without trace of edema or streaks of lymphangitis.

Drug rashes, caused by quinine, copaiba, potassium iodide, iodoform, are not uncommon but are seldom caused intentionally. Diphtheritic membrane may be caused by drinking carbolic acid or by blowing powdered cantharides or other such irritant on the tonsils.

Emphysema is simulated by introducing air into the subcutaneous tissues. This may be done by a hypodermic syringe or by making an incision, inserting a straw and blowing in air. A catheter may be used for introduction of air into the bladder.

Men with one or more double joints are not uncommon. They can at will with but little manipulation produce genuine subluxation. Unless the history of the case is known detection of the fraud is difficult. The ease with which the physician can cause the same lesions to appear and disappear under anesthesia is the most important means of diagnosis. Arrhythmia cordis, tachycardia, etc., may be caused in several ways. All of them have not yet been detected in practice. Chewing tobacco in the early morning and swallowing the saliva is one of the most common means. Digitalis and other drugs have also been taken for this purpose.

Wounds may be delayed in healing by applying chemical irritants or by mechanical interference. In such cases the wound should be covered with rubber tissue and the bandage sealed or the patient's hand confined in a muff.

Mutilation was sometimes practised in the Philippines in 1900. The soldier would place the butt of his gun on the ground, the weapon being cocked and loaded. Some part of the hand, usually the right forefinger, was placed on the muzzle and the trigger struck by the toe. After the practice became common, the disability thus produced, was, by order, noted as, "Not contracted in the line of duty."

In the Austrian army a number of men shot themselves through the left hand. The bullet was fired through bread which arrested powder grains. The practice was stopped by ordering that all men who mutilated themselves be executed promptly. Twenty-four were said to have been executed in one division in one day. Whether the wound was self-inflicted or not was determined by the medical officer in attendance and his report was final. In other services men wrapped a foot in wet cloths and shot off a great toe. Also men have held their hands above the parapets in order that they might be shot by the enemy.

Deliberate dilatation of the relaxed external abdominal rings by means of a device like a glove stretcher was formerly practiced by some Russian

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recruits in order to avoid service. It was stopped by requiring them to undergo operation for the relief of hernia.

Escharotics are sometimes applied to the genitals in order to simulate venereal disease.

Tumors are sometimes simulated by the injection of paraffin by some accomplice.

The following prescription is recommended by some members of the Royal Army Medical Corps in case of suspected malingering:

Olei Morrhuæ	30.
Tincture Asafetidæ	2.
Tincture Ferri Perchloride	.65
Olei Menthæ Piperitæ	.325
Aqua q. s. ad	60.
Sig. One dose. Sprinkle on top just before taking, Quinine Sulphatis	.65

To the uninitiated many of the measures mentioned for the detection of malingering may appear cruel or unduly severe. Their necessity, however, has long been apparent. It is obvious that they should be employed only when there is excellent reason to suspect that the disability is feigned, when, in short, several consultants are confident that this is the case but cannot definitely prove it without recourse to measures otherwise unwarrantable. Great care should be exercised that avoidable suffering is not caused. But while those who are actually incapacitated should receive all kindness and consideration, those who on false pretexts seek to fill the places reserved for the unfortunate, should be treated with rigor. When simulation is proven it should be punished promptly and severely, not in a vindictive spirit but to deter imitators. The importance of the subject is great, as armies may be depleted and demoralized by failure to control the practice.

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APPENDIX I

General Orders
No. 40.

WAR DEPARTMENT,
Washington, August 30, 1916.

The instructions for the preparation of Army payrolls and authorized abbreviations published as Quartermaster Corps Form No. 70 and model remarks for Army payrolls published as Quartermaster Corps Form No. 69, are hereby rescinded, and the following is published in their stead for the information of all concerned:

INSTRUCTIONS FOR THE PREPARATION OF ARMY PAYROLLS

1. The payrolls are not only the guide for the immediate payment of the troops interested, but when filed in the Treasury Department they become the record to which reference will thereafter be had in the investigation and settlement of claims or questions affecting the pay of the men whose names are borne thereon for the period involved. All officers are therefore enjoined to exercise every care to make the payrolls with which they are concerned complete in every detail.

2. **Composition of a Payroll.**—A payroll will be made up of one copy of War Department Form No. 366 and as many forms 366*a* as may be necessary, fastened together along the edge indicated by sewing or by means of a stapling machine or other permanent fastenings, but not by use of glue or mucilage.

3. **Number of Copies and Disposition of Same.**—Pawyrolls ill be made out in triplicate, and dated from the first to the last of the month. Two of the three copies (one being the signed roll) will be forwarded to the quartermaster and the third copy duly extended will be retained with the records of the organization.

4. **Signing of Rolls.**—Only one copy will be signed by the men, and when carbon copies are made the original will always be the copy to be signed. The roll to be signed will always be completed and fastened together before being signed. When it is known that payment is to be made by check none of the rolls will be signed by the men. Only men who are to be paid will sign the roll; those who for any reason are not to be paid will not sign; if, however, in such case, the roll be inadvertently signed, the signature will be erased. In cases of stoppages equaling or exceeding the pay due, complete data will be carried to the next succeeding rolls until a sufficient amount of pay is due to satisfy all stoppages and leave a balance for the soldier. (See par. 15 below.) If for any reason a soldier whose name appears on the payroll does not sign the roll and is not to be paid by check, a line will be drawn through the space intended for his signature.

5. **Typewritten and Carbon Copies Authorized.**—The preparation of payrolls on a typewriting machine is authorized providing a record ribbon is used. The making of carbon copies is also authorized, but they must be clear and legible throughout, and the original copy and the first carbon must be forwarded to the quartermaster, who will in turn forward the original copy, with his account current, to the Quartermaster General of the Army. Quartermasters will not be required to accept carbon copies that are not clear and legible throughout, and they are authorized to return illegible copies with request for legible ones.

6. **Names to be Entered on Roll.**—The names of officers of the Regular Army will not be entered on the roll, but all enlisted men will be taken up thereon from the date of receipt of notice of their assignment, whether or not they have yet joined, and will be entered in the column "Names, Present and Absent, and Absent, and Rank," in the following order: First, noncommissioned officers in the order of the grade given in

See Appendix II—553a.

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paragraph 9, Army Regulations, 1913, the names under each grade-heading appearing in the order of the dates of warrants; second, all others, except buglers, first-class privates, and privates in alphabetical order of grade; third buglers; fourth, first-class privates; fifth, privates. The names of the men under each grade-heading, except noncommissioned officers, will appear alphabetically. Lance corporals will be carried under the heading of "First class privates" or "Privates," depending on the actual grade held. The names and the headings will follow one another without interval, except when made necessary by the use of two or more lines, in the column of "Remarks" after a name. Men on detached service will be carried on the roll of the organization to which they belong in their proper place with remarks showing them on detached service and place, if known. In all cases the last name will be first, *e.g.*, Smith, John A., and not John A. Smith. Care will be taken to have the names correctly spelled and the dates of enlistment correct, and the signatures must correspond exactly with the names in the column, "Names, Present and Absent and Rank."

7. **Detachment Rolls.**—The names of men mustered for pay at stations where their companies or organizations are not mustered may be borne on one consolidated payroll.

All detachment payrolls for detachments composed of various organizations will show in a column ruled for that purpose the company, battery, troop, or other organization to which each man belongs.

8. **Ruling Extra Columns.**—The use of dots and the word "ditto" is prohibited, but when items of the same character, such as subsistence credit sales, clothing due United States, post exchange, and post laundry, are to be made against a sufficiently large number of men, columns may be ruled therefor in the space under "Remarks."

9. **By Whom And To What Date Paid.**—In the cases of soldiers who were last paid to date different from that to which the organization was last paid, or by a different quartermaster, as shown by the certificate of the commanding officer on the first page, the date to which last paid and the name of the quartermaster will be stated against their names under "Remarks."

10. **Column "Remarks"—Data Opposite Names.**—All data affecting a soldier's pay will be entered in the column "Remarks" in the manner indicated under the caption "Model Remarks" below.

Only such remarks as affect a soldier's pay will be entered. Opposite the name of the person concerned will be carefully noted:

(*a*) All changes of rank or grade. In case of appointment the number, date, and source of order will be stated; in case of reduction the data of receipt of order at soldiers station will also be stated.

(*b*) All authorized stoppages, fines, sentences, with number, date, and source of order.

(*c*) All cases of absence of enlisted men without leave or absence sick without pay for one day or more.

(*d*) All cases of confinement of one day or more by civil authorities and whether such prisoners have been held for trial, tried, or discharged without trial, and, when tried, whether acquitted or convicted, and dates of absence.

(*e*) Everything else affecting the pay of every enlisted man, so to insure justice to him and to the United States. As many lines as may be necessary to avoid crowding will be taken after each name, and only one line of written matter will be placed on one ruled line. When matter is typewritten, remarks exceeding one line will be single spaced without regard to the ruled lines on the paper.

11. **Clothing Account.**—For regulations concerning the settlement of a soldier's clothing account, see paragraphs 1159–1169, Army Regulations, 1913.

12. **Retention in Service Beyond Date of Enlistment.**—When soldiers are retained in the service with the colors to make good time lost the cause of such retention must be stated. In case a soldier who must be kept in the service beyond the date of expiration of term of enlistment in order to make good time lost and is in confinement at or after date of expiration of term of enlistment, the date of restoration to duty status, if so restored, will be stated.

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13. **Changes Since Last Muster for Pay.**—(*a*) Names of men belonging to a command will be immediately followed by those of the men who have ceased to belong to it since last muster for pay. These will be classed in the following order: (1) Discharged, (2) furloughed to the reserve, (3) transferred, (4) died, (5) retired, (6) deserted, (7) missing. Under each heading the names will appear in the order prescribed in paragraph 6 above. (*b*) The character of discharge (honorably discharged, or dishonorably discharged) will be noted on the roll. (*c*) In these cases: (1) Desertion; (2) dishonorable discharge; (3) discharged for desertion; (4) missing; (5) and discharge, honorable discharge, or furlough to the reserve when the stoppages equal or exceed the amount due the soldier; the soldier's account will be stated in full, showing rank or grade, date to which last paid, and by whom. All stoppages and charges (special care being taken to note all dues to post exchanges, company fund, etc.) and credits for deposits, etc., and the balance due the United States or due the soldier on account of clothing, and when the desertion, discharge, or furlough occurs within the first six months of enlistment the money value of clothing drawn since enlistment must also be stated; also dates and places will be given, and number, date, and source of order or other authority. (*d*) In cases of honorable discharge (except as prescribed in (*c*) above and (*e*) below), discharge or furlough (except as prescribed in (*c*) above), transfer, death, or retirement, only the rank or grade, the date of discharge, furlough, transfer, death or retirement, and the number, date, and source of the order or other authority will be given. (*e*) The names of men who are discharged during the period covered by the payroll and who reënlist in the same company during that time will be carried in the body of the roll only.

14. **Deserters.**—The name of a soldier who has joined from desertion since last muster for pay will be placed in the body of the roll only. The following data will appear on the first roll: The same data that appeared on the rolls on which the soldier was dropped as a deserter; a statement of his new account opened after date of return to military control (the account at date of desertion and the account since return to military control being stated separately); the place and date of return to military control; and whether he was apprehended or surrendered. On subsequent rolls until the result of the trial has been published, or the case otherwise disposed of, will appear the remark "Awaiting trial (or result of trial) for desertion. For statement of account, see rolls for ——, 191–." On the rolls following the final disposition of the case will appear a complete statement of the soldier's account at the date of such disposition of the case, the ante-desertion and post-desertion accounts to be stated separately, including the number, source, and the date of the order announcing his return to duty, or the result of the trial.

The restoration to duty of a deserter by competent authority, namely, by the commander who would be authorized to direct that he be brought to trial, can be ordered only in case the desertion is admitted, and must not be confused with the removal (by the order of such commander or the War Department) of a charge of desertion erroneously entered on the rolls against a soldier.

15. When a soldier is not paid on a payroll the organization commander must not attempt to settle the account by striking a balance between the undrawn pay and indebtedness, but the account as a whole must, except as provided in paragraph 14, be carried forward to succeeding rolls until the quartermaster can collect all dues to the United States and pay a balance to the soldier. (See A.R., 1374, 1913.)

16. Where changes occur in a quartermaster's figures in the "Balance paid" column, the company commander or officer witnessing the payment must certify in the margin of the roll the amount actually paid the soldier.

MODEL REMARKS FOR THE ARMY PAYROLLS

17. These model remarks are meant to cover only the more common cases. Cases arising not covered herein will be stated according to facts of record.

Any pay or allowances that may have accrued during a previous enlistment can-

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not be paid by a quartermaster, but a claim for same must be made on the Auditor for the War Department.

18. **Absence.**—(*a*) In hands of civil authorities.—In hands CAuth from Jan. 10 to Feb. 3/16, convicted (acquitted, released on bail, or released without trial).

(*b*) Without leave.—Awol Jan. 10 to 15/16.

1. Absence in the hands of civil authorities or without leave will be stated by dates of departure and return as above. The day of departure is a day of absence and day of return is a day of duty, without regard to hours, in case of enlisted men absent without leave or in hands of civil authorities. For example, "Awol Jan. 10 to 15/16," is an absence of five days, January 10 the day the soldier left post being a day of absence and January 15 the day he returned to post being considered a day of duty. Hours of departure and return will not be stated. An absence of less than 24 hours will not be entered on the payroll. (*c*) Sick, not in line of duty, G.O. 31, 1912, and 45, 1914.—Sick, not LDGO 31/12 and 45/14, Jan. 1 to 15/16, inc.

1. G.O. 31, 1912, requires the inclusive dates sick to be stated as distinguished from the method of stating absence without leave indicated above. In deducting pay for sick, quartermasters will treat the dates given as inclusive whether stated so or not.

19. **Allotments.**—(*a*) Commencement.—Allot $12 per month for 20 mos. fr. Jan. 1/16 to Aug. 31/17.

1. Allotments should begin with the first day of a month, except that no allotment will begin prior to date of current enlistment.

2. An allotment should be entered on the payroll for the month in which it commences without waiting for any report from the Quartermaster General that the allotment papers have been received.

3. A soldier should not be allowed to allot his entire monthly pay except for good reasons warranting such action, so that he may have at least a small balance due him each month to meet unforeseen indebtedness.

(*b*) Discontinuance.—1. Allot $12 per month for 20 mos. from Jan. 1/16; almt. discontd. with Apr. 30/17, letter QMG. Apr. 15/17.

2. Almt. of $12 per mo. for 20 mos. fr. Jan. 1/16, collected to, Aug. 31/17, discontd. with May 31/17, letter Q.M.G., June 15/17. Due Sol. $36 deducted for almt. for June, July, and Aug./17.

3. Discontinuances close on the last day of the month, unless a soldier deserts, severs his connections from active duty with the Army, or the allotment is discontinued before the end of the period of allotment. In such cases his commanding officer will make immediate report direct to the Quartermaster General, as required by Army Regulation 1350, stating the date to which the allotment has been collected, and in case of desertion, discharge, furlough to the reserve, death, etc., the date thereof.

4. An allotment should not be entered on payrolls subsequent to the expiration of the period for which the allotment was originally made, except when necessary to secure deduction or collection of the allotment for a month or months within such period yet due.

20. **Appointments.**—(*a*) Aptd. Sgt. fr. Corp. R.O. 10 Jan. 15/16. (*b*) Aptd. 1st. Sgt. fr. Sgt. O. 5 Jan. 10/16. (*c*) Aptd. Ck. fr. Pvt. O. 6 Jan. 10/16. (*d*) Aptd. Corp. fr. Pvt. O. 7 Jan. 20/16, under AR. 275, the Co. being absent from Regtl. Hq. (or AR. 256 or 271, with statement that the company or battalion is serving away from regimental headquarters).

21. **Appointments Continued In Force.**—(*a*) Disch. Jan. 5/16 wrnt. as Sgt. contd. (*b*) Disch. Jan. 4/16 wrnt. as Sgt. and apmt. as 1st. Sgt. contd. (*c*) Disch. Jan. 5/16 apmt. as Ck. contd. (*d*) Warrants and appointments may be continued only when reënlistment is accomplished within twenty days after discharge.

22. **Bonus For First Reënlistment.**—(*a*) Due Sol. bonus for reënl. Former service: Enl. Jan. 3/13; disch. in U.S. (given reason) Jan. 2/17 from Co. A 1st. Inf. as Pvt. 1st. enl. period; Sbo. at date of disch. drawing 35¢ per day ED. pay. (*b*) Reason for discharge must always be stated.

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23. **Certificate of Merit.**—(*a*) *When Awarded in Current Enlistment.*—On first roll all subsequent rolls until first payment: C. of M. fr. Jan. 5/16 (giving date of meritorious service, not date of order promulgating same). On subsequent rolls: C. of M. (*b*) *When Awarded in Previous Enlistment.*—On first roll and on all subsequent rolls until first payment: C. of M. fr. Jan. 10/10; pay due for same fr. enl. On subsequent rolls: C. of M.

24. **Damage To Private Property.**—(*a*) Due Harry J. Thompson, Lake City, Minn., under 54th Aw. $8.65 for damage to private property per approved finding board of officers.

25. **Desertion.**—(*a*) When within six months of enlistment a soldier deserts, is discharged, or furloughed to the reserve under the circumstances named in section (*c*) of paragraph 13 above, the money value of clothing drawn since enlistment will be stated in remarks on the payroll, in addition to the balance due the United States or the soldier. Also in such cases the remarks will show the amount due post exchanges, company fund, etc. (*b*) *Simply Desertion.*—Deserted at Ft. Jay, N. Y., Jan. 10/16. Due U.S. at date of desertion, Ord. $1.52, C & GE. $1.75; due Sol. Clo. $10; money value of clo. drawn since enlistment $35 (having deserted in first six months of enlistment); due PE Ft. Jay, N. Y., $3. Last pd. to Dec. 31/15 by Capt. Howard. Awol. during current enlistment Jan. 5 to 8/16 (or No. awol.). (*c*) *Acquittal.*—Deserted at Ft. Jay, N. Y., Aug. 10/15. Surrendered at Ft. Sheridan, Ill., Aug. 30/15. Tried for desertion and acquitted GCMO 60 C. Dept. Oct. 5/15. Last paid to June 30/15 by Maj. Howard. (*d*) *Not Guilty of Desertion, but Guilty of Absence without Leave.*—Deserted at Ft. Sheridan, Ill., Oct. 10/15. Apprehended by C. Auth. and delivered at Madison Bks. N. Y., Jan. 5/16. Tried, found guilty of awol. only and sentd. to forfeit ⅔ of his pay per mo. for 2 mos. GCMO 70 E. Dept. Feb. 1/16. Last Paid to Sep. 30/15 by Capt. Smith. (*e*) *Sentence of Desertion not Involving Dishonorable Discharge.*—Deserted at Ft. Missoula, Mont., June 5/15. Apprehended by C. Auth. and delivered at Ft. McPherson, Ga., Jan. 10/16. $50 reward pd. for apprehension and delivery. Due U.S. at date of desertion: Clo. $10.50: PE. Ft. Missoula, Mont., $5; due sol. for deps. $10. (In case soldier deserts after six months from enlistment, statement of money value of clothing drawn at date of desertion not required.) Convicted of desertion and sentenced to be confined at hard labor for six months and forfeit ⅔ of his pay per mo. for like period GCMO 150 E. Dept. Apr. 5/16. Last pd. to May 31/15 by Maj. Howard. (*f*) *Sentence of Desertion Involving Dishonorable Discharge.*—Deserted at Ft. Jay, N. Y., Feb. 5/16. Apprehended by C. Auth. and delivered at Ft. Sheridan, Ill., Feb. 27/16. $50 reward pd. for apprehension and delivery. Due U.S. at date of desertion: Clo. $10; money value of clo. drawn to date of desertion $35 (having deserted in first six months of enlistment). Clo. drawn since apprehension $2 (or no clo. drawn since apprehension); due PE Ft. Jay, N. Y., $3. Convicted of desertion and sentd. to be dishonorably disch. forfeiting all pay and allowances due and to be confined at hard labor for two years GCMO 36 C. Dept. Apr. 3/16. Dishonorably disch. at Ft. Sheridan, Ill., Apr. 5/16. Last pd. to Jan. 31/16 by Capt. Taylor. (*g*) *Restoration to Duty without Trial.*—Deserted at Ft. Snelling, Minn., Jan. 20/16. Surrendered at Vancouver Bks. Wash., Feb. 5/16. Restored to duty without trial SO. 64 West. Dept. Mch. 6/16. Due U. S. at date of desertion Clo. $10.50, PE. Ft. Missoula, Mont., $5; due sol. for deps. $10. (In case soldier deserts after six months from enlistment, statement of money value of clothing drawn at date of desertion not required.) Last pd. to Dec. 31/15 by Capt. Hood. (*h*) *Removal of Charge of Desertion.*—Deserted Jan. 12/16. Surrendered to military control Feb. 10/16. Charge of desertion removed as erroneously made par. 5 SO. 30 E. Dept. Feb. 25/16. Awol. Jan. 12 to Feb 10/16. Last pd. to Dec. 31/15 by Maj. Jones.

26. **Discharge, or Furlough to the Reserve** (see sec. (*a*) par. 25, above).—(*a*) *Honorable*—Honorably disch. (or furloughed to the reserve) Jan. 6/15 per (give reason).

(1) In case of retention in active service to make good time lost, or for other reason, the reason for retention must be stated. Thus: Held to make good time lost by awol.

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fr. Jan. 2 to 10/16. (*b*) *Discharge.*—Disch. Mch. 4/16 by reason of imprisonment under sentence of civil court par. 6 SO. 45 W.D. Feb. 25/16. (*c*) *Dishonorable, for Offences Other than Desertion.*—Dishonorably disch. at Ft. Sam Houston, Tex., Mch. 5/16, forfeiting all pay and allowances due GCMO. 110 S. Dept. Mch. 1/16. Due Sol: Depa. $150 clo. $16. D & FS. for deps. given. Last pd. Jan. 31/16 by Capt. Smith. (*d*) *On Surgeon's Certificate of Disability.*—Disch. Jan. 12/16 on SCD. par. 5 SO. 7W.D. Jan. 10/16. (*e*) *By Purchase.*—Disch. Jan. 10/16 by purchase par. 2 SO. 3 C. Dept. Jan. 4/16. (See G.O. 31, W.D., 1914.) (*f*) *On Account of Dependent Parent* (see G.O. 31, W.D., 1914.)—Disch. Jan. 25/16 on account of dependent parent par. 5 SO. 20 WD. Jan. 24/16.

27. **Extra Duty.**—(See G.O. 59, W.D., 1915.) (*a*) SbO. Jan. 1 to 31/16 twenty-six days worked one holiday. (*b*) SbO. Jan. 1 to 31/16 thirty-one days worked five Sundays and one holiday. (*c*) Clerk office C. Def. Engr. Jan. 1 to 31/16 twenty-six days worked one holiday.

28. **Foreign Service.**—(*a*) Left U.S. for PI. Jan. 5/16. (*b*) Arrived in U.S. from Alaska, Jan. 10/16. (*c*) Foreign service increase begins on date of leaving U.S. for foreign service and continues to date of return to U.S. both dates inclusive.

29. **Gunners, Rated Positions and Marksmanship Pay.**—(*a*) Pay due soldier under these headings will be entered as the first remark on payroll. (*b*) Remarks should be entered on the payrolls as prescribed by paragraphs 1343, 1344, and 1345, A.R.

30. **Overpayment.**—(*a*) Due U.S. $5 overpaid as ER. for Jan. /16 on Vou. 200 of Capt. Doe for Feb. /16. (*b*) The nature of an overpayment must always be stated.

31. **Quartermaster Supplies.**—(*a*) Due U.S. Clo. $6.50. (*b*) Due U.S. C & GE. $1.25. (*c*) Due U.S. RS. 50¢.

32. **Reductions.**—(*a*) Rd. fr. Ist. Sgt. to Sgt. Jan. 10/16. (*b*) Rd. fr. Sgt. to Pvt. RO. IO. Jan. 13/16 recd. sd. (*c*) Rd. fr. Ck. to Pvt. Jan. 12/16. (*d*) Rd. fr. Corp. to Pvt. Jan. 6/16. (*e*) Rd. fr. Sgt. to Pvt. and to forfeit $\frac{2}{3}$ of his pay per mo. for 2 mos. GCMO. 150 E. Dept. Mch. 2/16.

33. **Retirement.**—Retired Jan. 25/16 par. 1 SO. 20 WD. Jan. 24/16.

34. **Sentences.**—(*a*) Forfeit three days pay SC. Jan. 5/16. (Date of approval by post commander.) (*b*) To be confined for three mos. and to forfeit $\frac{2}{3}$ of his pay per mo. for a like period GCMO. 50 E. Dept. Mch. 2/16. $20 deducted for Feb. and Mch. /16 roll. Unexecuted portion of sent remitted SO. 55 E. Dept. Apr. 5/16. (*c*) In cases where the full amount of the sentence has not been deducted, the sum already stopped should be shown on the next roll.

35. **Subsistence Charges.**—(*a*) All charges entered against enlisted men on account of subsistence must be concisely noted. (*b*) Due U.S. credit sales Sub/16 $150. (*c*) Due U.S. refundment of Sub. /16 $3. (*d*) Due U.S. increased cost of rations Sub/16 $1.25. (*e*) Due U.S. com. of rations $3 furnished by Capt. Doe Ft. Myer, Va., June 5/16.

36. **Transfer.**—(*a*) Transferred to the 24th Inf. Jan. 20/16 par. I SO. 10 WD. Jan. 15/16. (Under loss, transferred.) (*b*) Transferred as Sgt. fr. Sgt. Co. B., this Regt. RO. 7 Jan. 25/16. (*c*) Transferred as Pvt. fr. Sgt. Co. B., this Regt. RO. 8 Jan. 27/16. O recd. at station of Sol. Jan. 30/16. (*d*) Date of receipt of order at station where soldier is serving is the date the transfer takes effect. If the transfer of a soldier from one organization to another changes his rate of pay, the date of the receipt of the order at the post where he is serving must always be shown.

37. **Transportation.**—Due U.S. $20 for trans. fr. New York City to Ft. Snelling, Minn., furnished by Capt. Doe QM. T/R No. 7565 Feb. 9/16.

38. **Authorized Abbreviations.**—The following abbreviations cover most of the names, grades, or terms commonly used in the preparation of payrolls, and under no circumstances will any other abbreviations be used for those stated below:

Branches of the service:

Cavalry.....Cav.
Coast Artillery.....CA.

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Dental Corps.....DC.
Engineers.....Engrs.
Field Artillery.....FA.
Infantry.....Inf.
Medical Corps.....MC.
Medical Department.....Med. Dept.
Medical Reserve Corps.....MRC.
Ordnance Department.....Ord. Dept.
Philippine Scouts.....PS.
Porto Rico Regiment of Infantry.....PRRI.
Quartermaster Corps.....QMC.
Signal Corps.....Sig. Cps.
Veterinary Corps.....VC.

Departments, etc.:
Eastern Department.....E. Dept.
Central Department.....C. Dept.
Hawaiian Department.....H. Dept.
Philippine Department.....P. Dept.
Southern Department.....S. Dept.
Western Department.....West. Dept.
War Department.....WD.
Coast Defenses.....C. Def.
District.....Dist.
Divisions.....Div.
.....Grades, etc.

Company:
Artificer.....Art.
Chief Mechanic.....Ch. Mec.
Cook.....CK.
Corporal.....Corp.
Farrier.....Far.
First Sergeant.....1st Sgt.
Horseshoer.....Hs.
Mechanic.....Mec.
Mess Sergeant.....Mess Sgt
Musician.....Mus.
Private.....Pvt.
Private, first class.....Pvt. Icl.
Saddler.....Sad.
Sergeant.....Sgt.
Sergeant Major.....Sgt. Maj.
Stable Sergeant.....Stab. Sgt.
Supply Sergeant.....Sup. Sgt.
Wagoner.....Wag.

Battalion, Squadron, and Regimental:
Battalion (Squadron) Supply Sergeant.....Bn. (Sq.) Sup. Sgt.
Battalion (Squadron) Sergeant Major.....Bn. (Sq.) Sgt. Maj.
Color Sergeant.....Col. Sgt.
Regimental Supply Sergeant.....Regtl. Sup. Sgt.
Regimental Sergeant Major.....Regtl. Sgt. Maj.

Miscellaneous:
Assistant Engineer.....Asst. Engr.
Casemate Electrician.....Cm. Elec.

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Chief Loader.....Ch. Load.
Chief Planter.....Ch. Plan.
Coxswain.....Coxn.
Electrician Sergeant, first class.....Elec. Sgt. Icl.
Electrician Sergeant, second class.....Elec. Sgt. 2cl.
Engineer.....Engr.
Expert Rifleman.....ER.
Fireman.....Fm.
First class Gunner.....Icl. Gun.
First class Sergeant.....Icl. Sgt.
Gun Commander.....Gn. Comdr.
Gun Pointer.....Gn. Ptr.
Hospital Sergeant.....Hosp. Sgt.
Marksman.....Mm.
Master Electrician.....Mr. Elec.
Master Engineer, junior grade.....Mr. Engr. jr. gr.
Master Engineer, senior grade.....Mr. Engr. sr. gr.
Master Gunner.....Mr. Gun.
Master Hospital Sergeant.....Mr. Hosp. Sgt.
Master Signal Electrician.....Mr. Sig. Elec.
Observer, first class.....Obs. Icl.
Observer, second class.....Obs. 2cl.
Plotter.....Plot.
Quartermaster Sergeant.....QM. Sgt.
Quartermaster Sergeant, senior grade.....QM. Sgt. sr. gr.
Second class Gunner.....2cl. Gun.
Sergeant Major, senior grade.....Sgt. Maj. sr. gr.
Sergeant Major, junior grade.....Sgt. Maj. jr. gr.
Sergeant, first class.....Sgt. Icl.
Sharpshooter.....Ss.

Months:

January.....Jan.
February.....Feb.
March.....Mch.
April.....Apr.
August.....Aug.
September.....Sep.
October.....Oct.
November.....Nov.
December.....Dec.

Orders:

Battery Orders.....O.
Company Orders.....O.
Current Series.....Cs.
Field Orders.....FO.
General Orders.....GO.
General Orders, Coast Defenses.....GO. C. Def.
General Orders, Post.....GOP.
Regimental Orders.....RO.
Special Orders.....SO.
Special Orders, Coast Defenses.....SO. C. Def.
Special Orders, Post.....SOP.
Troop Orders.....O.
Verbal Orders, Battery Commander.....VOBC.

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Verbal Orders, Company Commander.....VOCC.
Verbal Orders, Post Commander.....VOPC.
Verbal Orders, Regimental Commander.....VORC.
Verbal Orders, Troop Commander.....VOTC.

Organizations:
Battalion.....Bn.
Battery.....Btry.
Company.....Co.
Headquarters Company.....Hq. Co.
Machine Gun Company.....MG. Co.
Noncommissioned Staff.....NCS.
Noncommissioned Staff, Coast Artillery.....NCSCA.
Post Noncommissioned Staff.....PNCS.
Regiment.....Regt.
Squadron.....Sq.
Supply Company.....Sup. Co.
Troop.....Tr.

Titles, designations, and officers:
Adjutant General.....AG.
Adjutant Generals Office.....AGO.
Captain.....Capt.
Colonel.....Col.
Lieutenant.....Lt.
Lieutenant Colonel.....Lt. Col.
Major.....Maj.
Quartermaster.....QM.
Quartermaster General.....QMG.
Quartermaster General's Office.....QMGO.
The Adjutant General, U.S. Army.....AGA.

Miscellaneous:
Absent without leave.....Awol.
Allotted.....Alot
Allotment.....Almt.
Appointed.....Aptd.
Appointment.....Apmt.
Article of War.....AW.
Artillery District.....A. Dist.
Assistant.....Asst.
Barracks.....Bks.
Cent (s).....¢
Certificate of merit.....C. of M.
Civil authorities, in hands of.....In hands C Auth.
Classification.....Class.
Clothing.....Clo.
Clothing and garrison equipage.....C&GE.
Commanding.....Comdg.
Commutation.....Com.
Continued.....Contd.
Descriptive list.....DL.
Department.....Dept.
Deposits.....Deps.
Detached service.....DS.
Detachment.....Det.

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Discharge } Disch.
Discharged }
Discontinued.....Discontd.
Enlistment.....Enl.
Extra duty.....ED.
Expiration of term of service.....ETS.
Fort.....FT.
From.....fr.
Garrison court-martial.....Gar. CM.
General court-martial.....GCM.
Hawaiian Islands.....HI.
Headquarters.....Hq.
Hospital.....Hosp.
Inclusive.....Inc.
Indorsement.....Ind.
Line of duty.....LD.
Month (s).....mo (s).
Ordnance.....Ord.
Panama Canal Zone.....Pan. CZ.
Paid.....Pd.
Paragraph.....Par.
Philippine Islands.....PI.
Post Exchange.....PE.
Post Hospital.....PH.
Post Laundry.....PL.
Qualification.....Qual.
Quarters.....Qrs.
Reappointed.....Reaptd.
Reduced.....Rd.
Received.....Recd.
Reënlistment.....Reënl.
Regimental.....Regtl.
Regular Supplies.....RS.
Relieved.....Reld.
Requalified.....Requal.
Same date.....sd.
Sentence of summary court.....Sent. SC.
Sentenced.....Sentd.
Soldier.....Sol.
Special Court-Martial.....Sp. CM.
Special duty.....SD.
Submarine mine property.....SMP.
Subsistence.....Sub.
Summary Court.....SC.
Surgeon's certificate of disability.....SCD.
Switchboard operator.....SbO.
Transportation.....Trans.
Transportation request.....TR.
United States.....US.
United States Army.....USA.
Voucher.....Vou.
Warrant.....Wrnt.

By order of secretary of War.

Major General, Chief of Staff.

The Adjutant General.

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Instructions for persons leaving the United States under orders from the War Department. (General Orders No. 76, War Dept., June 26, 1917.)

IV. The following instructions, in connection with the departure from the United States of officers and enlisted men of the Army and of civilians traveling under instructions of the War Department or of any bureau thereof, are published to the Army for the information and guidance of all concerned:

1. When officers and enlisted men of the Army are required or authorized to leave the United States individually to proceed to a foreign port or country, they will each be provided with a travel order or letter directing the journey, issued by The Adjutant General of the Army and authenticated in the usual manner. Unless officers and enlisted men are provided with such order or letter, and have them in their actual possession, they are not authorized to take passage on any ship destined to a foreign port or country, nor, having arrived in such foreign port or country, will they be considered as being there by authority unless they can produce such order or letter.

2. Civilians authorized by the War Department or any bureau thereof to proceed individually from the United States to a foreign port or country will be required to have in their possession a passport issued by the State Department upon formal application of the War Department. Unless such civilians have in their actual possession such passport they will not be considered by the War Department as authorized to take passage on any ship destined for a foreign port or country, nor, having arrived in such port or country, will they be considered as having the authorization of the War Department to remain there.

3. Commanding officers of expeditions, organizations, or parties dispatched, under orders of the War Department, to a foreign port or country, will be held responsible that no unauthorized person, military or civilian, accompany the expedition, and to that end will exercise every precaution to prevent such unauthorized persons from embarking on any ship belonging to the expedition. (2616056, A. G. O.)

Method of numbering organizations of the Army of the United States. (General Orders, No. 115, August 29, 1917.)

I. General Orders, No. 88, War Department, 1917, is rescinded and the following substituted therefor:

1. The three parts of the Army of the United States referred to in the act of Congress approved May 18, 1917, are designated as follows:

Regular Army.
National Guard.
National Army.

2. The various organizations of each class in the Regular Army, National Guard, and National Army will be numbered in separate series and the first number of each series will be as indicated in the following table:

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SYSTEM TO BE FOLLOWED IN NUMBERING AND DESIGNATING UNITS OF THE ARMY OF THE UNITED STATES

Units of organization	First number of series			Example of proper designation
	Regular army	National guard	National army	
Infantry divisions	1	26	76	76th Division.
Cavalry divisions (either mounted or dismounted).	15	.....	.....	15th Cavalry Division.
Infantry brigades	1	51	151	51st Infantry Brigade.
Cavalry brigades	1	51	151	1st Cavalry Brigade.
Field Artillery brigades	1	51	151	151st Field Artillery Brigade.
Infantry regiments	1	101	301	1st Infantry.
Cavalry regiments	1	101	301	101st Cavalry.
Field Artillery regiments	1	101	301	301st Field Artillery.
Engineer regiments (Pioneers)	1	101	301	1st Engineers.
Engineer trains	1	101	301	1st Engineer Train.
Engineer regiments or battalions (corps, army, and line of communications, except service battalions).	.....	.....	10	10th Engineers (Forestry). 36th Engineer Battalion (Road).
Engineer companies and detachments.	.....	.....	401	401st Engineer Company (Mining).
Engineer service battalions	.....	.....	501	501st Engineer Battalion (Service).
Artillery regiments made up of Coast Artillery Corps personnel.	51	151	.....	51st Artillery (C. A. C.—Railroad).
Artillery regiments made up of Cavalry or Infantry personnel.	76	176	.....	76th Artillery (19th Cav., Light).
Trench mortar batteries	1	101	301	1st Trench Mortar Battery (C. A. C.).
Field Artillery brigades made up of these Artillery regiments to be numbered in same series as other Field Artillery brigades.	.....	.....	.....	15th Field Artillery Brigade (Cav., Light).

SIGNAL CORPS

Field battalions	1	101	301	301st Field Signal Battalion (N. J.).
Telegraph battalions	51	151	401	51st Telegraph Battalion.

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AVIATION SECTION

Units of organisation	First number of series			Example of proper designation
	Regular army	National guard	National army	
Aero squadrons	Single series, beginning with 1.			1st Aero Squadron (Service).
Balloon squadrons	Single series, beginning with 1.			1st Balloon Squadron.

MEDICAL DEPARTMENT

Field Hospital companies	1	101	301	Field Hospital Company No. 1.
Ambulance companies	1	101	301	Ambulance Company No. 301.
Ambulance sections of United States Army Ambulance Service (G. O. No. 75, W. D., 1917).	.....	.....	501	Ambulance Section No. 501.
Base hospitals	1	101	301	United States Army Base Hospital No. 1.

QUARTERMASTER CORPS

Motorcycle companies	1	101	301	Motorcycle Company No. 301.
Motor truck companies	1	101	301	Motor Truck Company No. 1.
Bakery companies	1	101	301	Bakery Company No. 301.
Supply companies	1	101	301	Supply Company No. 301.
Stevedore regiments	1	101	301	301st Stevedore Regiment.
Mechanical repair shops	1	101	301	Mechanical Repair Shop No. 301.
Remount depot (auxiliary)	1	101	301	Remount Depot No. 301 (Auxiliary).
Remount depot (field)	.....	.....	351	Remount Depot No. 351 (Field).
Pack train companies	1	101	301	Pack Train Company No. 1.

3. The designation of regiments of the National Guard may show in parenthesis their former State designations, as, for example—

——th Infantry (1st La.).
——th Field Artillery (1st Miss.).

The designations of regiments of the National Army may show in parenthesis the State from which each regiment, or the bulk of it, was drawn, as, for example—

——th Infantry (N.Y.).
——th Field Artillery (N.J.).

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4. Provisional organizations of one arm or branch made up of personnel drawn from another arm or branch may show the source of their personnel in parenthesis after their provisional designations. In the cases of various types of mobile artillery organizations thus formed they will be designated simply as "artillery," and the special type of equipment used may be added in parenthesis when desirable to do so, thus:

REGULAR ARMY

——st Artillery (C.A.C.—Railroad).
——th Artillery (C.A.C.—Antiaircraft).
——th Artillery (C.A.C.—8-inch howitzer).
——th Artillery (19th Cav.—Light).

NATIONAL GUARD

——st Artillery (Cal. C.A.—8-inch howitzer).
——th Artillery (1st S. Dak. Cav.—Light).

5. This system contemplates that the designations in parenthesis will ordinarily be omitted in orders, dispatches, and correspondence, but their use is authorized when desired for the purpose of local identification and to preserve traditions and local pride. (320.1, A.G.O.)

Definition of "date of enlistment" and "place of enlistment" for the National Army.

II. The "date of enlistment" of a soldier of the National Army is the date specified in the notice of the local board for the man to report to the local board or at a designated place for military duty. This date marks the induction of the man into the military service of the United States, whether he actually reports in person for military duty or not.

In the case of an alternate who is substituted for an absentee, the date of enlistment is the date of writing in his name by the local board on the list of men ordered to report for military duty.

The "place of enlistment" of a soldier of the National Army is the place specified in the notice of the local board for him to report for military duty. (315.02, A.G.O.)

INFORMATION OF PROPOSED MOVEMENTS

Making public details concerning over-seas movements prohibited. (General Orders, No. 94, July 16, 1917.)

II. Section I, General Orders, No. 75, War Department, 1917, is rescinded, and the following is substituted therefor:

Superseded.

All persons connected with the military service who receive information of proposed over-sea movements of organizations, detachments, or individuals are forbidden to make public the details of such movements.

The names of organizations, dates of departure, arrival, or of embarka-

See Appendix II—566a.

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tion, or the name of the port of embarkation or of the ships to be used in such movements will not be disclosed.

When necessary to advise relatives or other private persons of approaching departure, persons connected with the military service will convey only information absolutely necessary, which will not include dates or the names of ships or ports of departure or the designation of organizations.

The marking of cars or of baggage so as to indicate an over-sea destination, the date of departure, or the name of the ship on which sailing will be avoided. Baggage for over-sea shipments will be addressed to the quartermaster of the port of embarkation and information furnished the quartermaster of the disposition to be made of it.

Violations of the provisions of this order will be investigated and disciplinary measures applied to offenders. (000.73 A.G.O.)

Regulations governing prohibition of alcoholic liquors near military camps[1] (Bulletin No. 45, July 23, 1917).

III. 1. Under authority of section 12 of the act "to authorize the President to increase temporarily the Military Establishment of the United States," approved May 18, 1917, reading—

That the President of the United States, as Commander in Chief of the Army, is authorized to make such regulations governing the prohibition of alcoholic liquors in or near military camps and to the officers and enlisted men of the Army as he may from time to time deem necessary or advisable: *Provided*, That no person, corporation, partnership, or association shall sell, supply, or have in his or its possession any intoxicating or spirituous liquors at any military station, cantonment, camp, fort, post, officers' or enlisted men's club, which is being used at the time for military purposes under this act, but the Secretary of War may make regulations permitting the sale and use of intoxicating liquors for medical purposes. It shall be unlawful to sell any intoxicating liquor, including beer, ale, or wine, to any officer or member of the military forces while in uniform, except as herein provided. Any person, corporation, partnership, or association violating the provisions of this section or the regulations made thereunder shall, unless otherwise punishable under the Articles of War, be deemed guilty of a misdemeanor, and be punished by a fine of not more than $1000 or imprisonment for not more than twelve months or both.

The following regulations are established by the President.

No person, whether acting individually or as an officer, member, agent, representative, or employee of a corporation, partnership, or association, or as an agent, representative, or employee of an individual, shall, in or within 5 miles of any military camp, except as hereinafter provided, sell or barter, directly or indirectly, either alone or with any other article, any alcoholic liquor, including beer, ale, or wine, to any person, or give or serve any such alcoholic liquor to any person, except that this prohibition against serving or giving alcoholic liquor shall not apply to the serving of wines or liquors in a private home to members of the family or to bona fide guests therein other than officers or members of the military forces; and no person, whether acting

See Appendix II—857a.

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individually or as a member, officer, agent, representative, or employee of any corporation, partnership, or association, or as an agent, representative, or employee of an individual, shall send, ship, transmit, or transport in any manner, or cause to be shipped, transmitted, or transported in any manner, any alcoholic liquor, including beer, ale, or wine, to any place within 5 miles of any military camp, except for use in his home as hereinbefore authorized: *Provided*, That where the existing limits of an incorporated city or town are within 5 miles of a military camp, the prohibition upon the sale, barter, gift, service, sending, shipment, transmission, or transportation of alcoholic liquors imposed by this regulation shall not apply to any part of the incorporated city or town distant more than one-half mile from said camp.

2. Under authority of section 13 of the act "to authorize the President to increase temporarily the Military Establishment of the United States," approved May 18, 1917, which section reads—

That the Secretary of War is hereby authorized, empowered, and directed during the present war to do everything by him deemed necessary to suppress and prevent the keeping or setting up of houses of ill fame, brothels, or bawdy houses within such distance as he may deem needful of any military camp, station, fort, post, cantonment, training, or mobilization place, and any person, corporation, partnership, or association receiving or permitting to be received for immoral purposes any person into any place, structure, or building used for the purpose of lewdness, assignation, or prostitution within such distance of said places as may be designated, or shall permit any such person to remain for immoral purposes in any such place, structure, or building as aforesaid, or who shall violate any order, rule, or regulation issued to carry out the object and purpose of this section shall, unless otherwise punishable under the Articles of War, be deemed guilty of a misdemeanor and punished by a fine of not more than $1000 or imprisonment for not more than twelve months, or both.

The keeping or setting up of houses of ill fame, brothels, or bawdy houses within 5 miles of any military camp, station, fort, post, cantonment, training, or mobilization place being used for military purposes by the United States is prohibited. (250.12, A.G.O.)

Instructions for correspondence by mail or telegraph between United States and forces in Europe[1] (Bulletin No. 44, July 20, 1917).

I. 1. The following instructions are published for the information and guidance of all concerned in personal correspondence by mail or telegraph between the United States and American military forces in Europe. Modifications or additional instructions will be published from time to time as conditions may require.

2. *Mail for Europe.*—(*a*) Mail addressed to members of the Expeditionary Forces should bear the complete designation of the division, regiment, company, or other organization to which the addressee belongs.

(*b*) In the upper left-hand corner of an envelope should be placed the usual form of return request and name and address of the sender.

(*c*) Under no circumstances will the location or station of a military

See Appendix II—568a.

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organization be included in the address on a letter for a person or an organization in Europe.

(*d*) Postage should be fully prepaid on foreign-bound matter. The rate on letter mail to our military forces in France is three cents per ounce or fraction thereof.

Newspaper mail is carried for 1 cent per 4 ounces.

(*e*) Letters, post cards, and printed matter originating in the United States or any of its possessions for transmission to the United States Expeditionary Forces in Europe are subject to the United States domestic classification, conditions, and rates of postage.

(*f*) No other than United States postage stamps are valid for the prepayment of postage.

(*g*) The correct manner of addressing a letter is as follows:

Return to
Mrs. John Smith,
———Blank Street,
New York City.

JOHN SMITH, JR.
Co. X, ——— Infantry,
American Expeditionary Forces.

(*h*) Personal mail for American military personnel in Europe will not be forwarded in care of The Adjutant General of the Army, as a general rule. This may be done, however, in cases where the writer does not know that the addressee has actually embarked.

3. *Mail from Europe.*—(*a*) Mail addressed to persons in the United States or any of its possessions will be addressed in the usual way, but nothing will be written in or upon a letter to indicate the place or station of the writer, or of any person or organization of our own forces or of those of our allies.

(*b*) United States mail service established in Europe is prepared to sell postage stamps, post cards, etc., to our military forces. In cases where the soldier may be unable to purchase stamps to prepay postage, the letter may be indorsed by the proper officer and forwarded to its destination as provided by Postal Laws and Regulations published in paragraph 199 (p. 426), Compilation of Orders, 1881–1915.

(*c*) The provisions of (*b*), (*e*), and (*f*), paragraph 2 herein, are applicable to mail from our forces in Europe to the United States or any of its possessions, except that the organization of the sender will be substituted for the address indicated in (*b*), paragraph 2.

4. *Postal Money Orders.*—Money orders payable at the United States postal agency or its branches in Europe will be sold to purchasers in the United States or its possessions, and money orders payable in the United States or its possessions will be sold to purchasers at the agency and its

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branches in Europe, under regulations provided by the Post Office Department, at domestic rates.

5. *Registered Letters and Valuables.*—Money and valuables will not be accepted for transmission by registered mail. Important papers which can be duplicated if lost may be accepted for registration, but indemnity will not be paid for lost registered mail.

It is unsafe to inclose currency in letters under any circumstances. Postal money orders should be used.

6. *Parcel-post Service.*—There is no provision at present for parcel-post service between our forces in Europe and the United States or its possessions.

7. *Personal Telegrams.*—(*a*) Private telegrams to be cabled to members of the American Expeditionary Force in Europe will be addressed "*Amexforce, London,*" with the addressee's name and the official designation of the unit to which he belongs appearing as the first words of the text. When so addressed they will reach an official who knows the location of the various American units, and who will forward the messages, by mail, to the proper destination.

Under no circumstances will the location or station of a unit be designated in the address or body of a telegram.

Examples: A telegram to Capt. John B. Jones, Medical Corps, United States Army Base Hospital No. 10, American Expeditionary Forces, would be in the following form:

Amexforce, London:

John B. Jones, Base Hospital No. 10. Have followed your instructions.

MARY JONES.

Similarly a telegram for Private J. K. Smith, Company K, Forty-seventh United States Infantry, would be sent as follows:

Amexforce, London:

H. K. Smith, Co. K, Forty-seventh, U. S. Infantry. Will not change address.

JANE SMITH.

(*b*) *Body of Telegram.*—The regulations of the European censorship provide that messages must be written in plain language (English or French) or in an authorized code, and must be intelligible to the censors. The use of two codes or two languages or of combinations of code and plain language in the same message is forbidden. Telegrams without text or with but one plain language text word are not admitted. As hereinafter explained, code language may be used only in full-rate messages.

(*c*) *Codes.*—The following are the only codes authorized by the regulations of the British censorship:

1. A.B.C., 5th.
2. Scotts' 10th.
3. Western Union.
4. Lieber's.

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5. Bentley's Complete Phrase Code (not including the oil and mining supplements).

6. Broomhall's Imperial Combination Code.

7. Broomhall's Imperial Combination Code, rubber edition.

8. Meyer's Atlantic Cotton Code, 39th edition.

9. Riverside Code, 5th edition.

If use is made of one of these codes, the code must be designated when the message is filed. It will be useless to make use of codes in any case unless the person to whom the message is addressed is stationed in a city where he may have access to a code book with which to decode the message.

Consideration is being given to the feasibility of authorizing the use, in addition to the above, of the Army and Navy code which has heretofore been in use for transpacific messages. If the use of this code be authorized the fact will be announced.

(*d*) *Signature.*—Every message must be signed. The surname may be used alone, but such a signature as "John," "Mary," "Mother," etc., will not be passed.

(*e*) *Classes of Service.*—Three classes of service are available at the present time between the United States and England: The full-rate service for which charges range from 25 cents to 37 cents per word; the deferred-rate service at from 9 cents to 15½ cents per word; and a special week-end letter service at from 5 cents to 9 cents per word. The rates vary from different sections of the country.

The full-rate service calls for immediate transmission and delivery; code may be used. Deferred-rate messages are transmitted after the full-rate traffic is disposed of. These messages must be written in plain language, and figures, except in the address, must be expressed in words.

The special week-end service (Western Union) is for messages of a social character, to and from persons serving with the American forces in Europe. They may be filed at any time during the week up to midnight Saturday, and it has been arranged to transmit them as and when the traffic conditions permit, and to deliver them on receipt. Plain language must be used. Figures in the body of the message are permitted.

In deferred-rate messages the indication LCO., and in week-end letters EFM., denoting the character of the service paid for, must be inserted immediately before the address, and will be counted and paid for. (311.14, A.G.O.)

Organization commanders directed to instruct men relative to proper address of mail matter.

II. Organization commanders will instruct each of their men, and all recruits who hereafter join, as to the importance of proper address of mail matter.

An enlisted man, on assignment, should be directed to enjoin on all correspondents to make a careful written memorandum of the company and regiment to which he belongs, and *always* to *include this information* in addressing mail matter. In addition to the foregoing, the name and address

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of the sender should appear on the envelope or wrapper. (2600757A, A.G.O.)

Parcel-post rates to forces in Europe[1] (Bulletin No. 46, August 15, 1917).

I. The following order of the Postmaster General is published to the Army for the information and guidance of all concerned:

DOMESTIC PARCEL-POST RATES AND CONDITIONS APPLICABLE TO AND FROM UNITED STATES EXPEDITIONARY FORCES IN EUROPE

OFFICE OF THE POSTMASTER GENERAL,

[ORDER No. 541.] *Washington, July* 24, 1917.

Parcels of fourth-class or domestic parcel-post matter not exceeding 12 pounds in weight, originating in the United States or any of its possessions for transmission to the United States Expeditionary Forces in Europe, and such parcels originating with those forces for transmission to the United States or its possessions, are subject to the United States domestic classification, conditions, and rates of postage, the eighth zone rate of 12 cents for each pound or fraction thereof being chargeable on parcels subject to pound rates, but such parcels may not be registered, insured, or sent C.O.D.

Parcels intended for members of the United States Expeditionary Forces in Europe should be addressed in the following manner: (1) Name of addressee. (2) Official designation of unit to which addressee belongs. (3) The words "American Expeditionary Forces." Under no circumstances should the location or station of a military organization be included in the address on mail for any member of such forces.

Every parcel must bear the sender's name and address, which should be placed in the upper left corner of the address side; and it is of the utmost importance that parcels sent to the expeditionary forces be securely packed and wrapped, fully and plainly addressed in accordance with the foregoing, and have proper postage prepaid thereon.

Parcels addressed to the American Expeditionary Forces shall be dispatched in the same manner as other mail intended for those forces.

A. S. BURLESON,
Postmaster General.

(311.16, A.G.O.)

Announcement of the publication of special regulations (Bulletin No. 24, War Dept., April 24, 1917).

II. 1. It is the purpose of the War Department to publish hereafter as special regulations certain regulations that have heretofore been published in general orders, circulars, bulletins, and pamphlets.

2. A tentative list showing the special regulations thus far issued, as

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well as the regulations that will hereafter be issued as special regulations, will be furnished to all officers and organizations. The present form of publication of the latter and the numbers to be assigned to them when published hereafter as special regulations will also be shown on the list.

3. Loose-leaf binders will be issued by the Quartermaster Corps to officers and organizations for use in keeping files of special regulations. Regulations issued in special regulation form are punched for insertion in the binders, and the remaining ones can be inserted by the use of stubs and fillers furnished for the purpose with the binders. Such of the regulations as are included in the Compilation of Orders need not be bound in the files of special regulations pending their reissue in special regulation form.

4. Each officer can select from the series of special regulations the particular ones that he may require for study and reference, and bind these and no others in the loose-leaf binder provided for the purpose. Files of special regulations for organizations can be made up in like manner of the special regulations needed in the organizations.

5. Special regulations that are superseded or that become obsolete or inoperative will be removed from the file and destroyed, and revised or new regulations inserted in the appropriate places in the file. The file will thus contain live matter only and yet will be complete.

6. Changes in special regulations will be published in the same form as changes in other regulations and will be pasted in the proper places in the pamphlets. (2549013, A.G.O.)

ORDERS, ETC.

Bulletin No. 53, W.D., 1917 reads as follows:

1. Commencing with September, 1917, there will be published at the end of each month, under one cover, extracts of all general orders and bulletins of the War Department issued during the month that relate to regimental and company administration. These monthly extracts will be distributed on the basis and in the manner prescribed in paragraph 803, Army Regulations, 1913, for general orders of the War Department, except that the distribution to tactical divisions and to officers and organizations attached to or serving with such divisions will be made by the division adjutants instead of the department adjutants.

2. Extracts of general orders and bulletins issued by the War Department during the period from January 1 to August 31, 1917, are now being printed and will be distributed to the Army at an early date. A supplement to the Compilation of Orders, 1881–1915, containing general orders and bulletins of 1916, and certain orders of previous years will also be distributed to the Army at an early date.

3. Until further orders War Department general orders and bulletins will not be distributed to officers below the grade of major, nor to troops, batteries, and companies, except supply troops and companies. Four of the five copies of general orders and bulletins distributed to regimental

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headquarters under the provisions of paragraph 803, Army Regulations, 1913, will be used for circulation among officers of the regiment below the grade of major. Two complete files of general orders and bulletins will be kept in each regiment, one at regimental headquarters and one in the supply troop or company. The distribution of general orders and bulletins to tactical divisions and to officers and organizations attached to or serving with such divisions will be made by the division adjutants instead of the department adjutants. Paragraph 803, Army Regulations, 1913, is modified accordingly.

4. Department and division commanders and chiefs of bureaus and offices of the War Department will furnish The Adjutant General of the Army with lists showing in detail the number of copies of War Department general orders and bulletins required to make the distribution prescribed by paragraph 803, Army Regulations, 1913, as modified by paragraph 3 of this bulletin.

5. Until further orders, special regulations and changes in Army Regulations and other regulations and manuals of the War Department will be distributed to the Army in the manner prescribed by paragraph 803, Army Regulations, for distribution of War Department general orders, except that the distribution to tactical divisions and to officers and organizations attached to or serving with such divisions will be made by the division adjutants instead of the department adjutants.

[300.42, A.G.O.]

PRISONERS OF WAR

American Prisoners' Central Committee, Berne, Switzerland. (Bulletin No. 40, July 11, 1917.) The American Legation at Berne, Switzerland, has formed an organization at that place, by direction of the Department of State, to coöperate under instructions from that department with the Spanish ambassador in Berlin, representing American interests in Germany, for the relief of Americans who are now or may be in the future detained as prisoners of war in Germany. This organization has been designated the American Prisoners' Central Committee, address Berne, Switzerland.

All members of the Army of the United States and all persons accompanying or serving therewith and subject to military jurisdiction should, in case of capture by German forces, communicate with that committee. (383.6, A.G.O.)

TERMS AND CONDITIONS OF SOLDIERS' AND SAILORS' INSURANCE

I, William C. De Lanoy, Director of the Bureau of War-Risk Insurance in the Treasury Department, pursuant to the provisions of section 402 of an act "to amend 'An act to authorize the establishment of a Bureau of War-Risk Insurance in the Treasury Department,' approved September 2, 1914, and for other purposes," approved October 6, 1917, hereby, on this 15th day of October, 1917, by direction of the Secretary of the Treasury, determine

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upon and publish these full and exact terms and conditions of the contract of insurance to be made under and by virtue of the act:

1. Insurance will be issued for any of the following aggregate amounts upon any one life:

Amount	Converted into monthly installments of—	Amount	Converted into monthly installments of—
$1,000	$5.75	$6,000	$34.50
$1,500	8.63	$6,500	37.38
$2,000	11.50	$7,000	40.25
$2,500	14.38	$7,500	43.13
$3,000	17.25	$8,000	46.00
$3,500	20.13	$8,500	48.88
$4,000	23.00	$9,000	51.75
$4,500	25.88	$9,500	54.63
$5,000	28.75	$10,000	57.50
$5,500	31.63		

Which installments will be payable during the total and permanent disability of the insured, or if death occur without such disability, for 240 months, or if death occur following such disability, for a sufficient number of months to make 240 in all including months of disability already paid for, in both cases except as otherwise provided.

2. The insurance is issued at monthly rates for the age (nearest birthday) of the insured when the insurance goes into effect, increasing annually upon the anniversary of the policy to the rate for an age one year higher, as per the following table of rates:

Rates at ages higher or lower will be given on request.

The insurance may be continued at these increasing term rates during the war and for not longer than five years after the termination of the war, and may be continued thereafter without medical examination if the policy be converted into a form selected before the expiration of such five years by the insured from the forms of insurance which will be provided by the bureau, provided that premiums are paid therefor at net rates computed by the bureau according to the American Experience Table of Mortality and interest at 3½ per cent. per annum.

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Age	$1,000	$1,500	$2,000	$2,500	$3,000	$3,500	$4,000	$4,500	$5,000	$5,500	$6,000	$6,500	$7,000	$7,500	$8,000	$8,500	$9,000	$9,500	$10,000
15	$0.63	$0.95	$1.26	$1.58	$1.89	$2.21	$2.52	$2.84	$3.15	$3.47	$3.78	$4.10	$4.41	$4.73	$5.04	$5.36	$5.67	$5.99	$6.30
16	.63	.95	1.26	1.58	1.89	2.21	2.52	2.84	3.15	3.47	3.78	4.10	4.41	4.73	5.04	5.36	5.67	5.99	6.30
17	.63	.95	1.26	1.58	1.89	2.21	2.52	2.84	3.15	3.47	3.78	4.10	4.41	4.73	5.04	5.36	5.67	5.99	6.30
18	.64	.96	1.28	1.60	1.92	2.24	2.56	2.88	3.20	3.52	3.84	4.16	4.48	4.80	5.12	5.44	5.76	6.08	6.40
19	.64	.96	1.28	1.60	1.92	2.24	2.56	2.88	3.20	3.52	3.84	4.16	4.48	4.80	5.12	5.44	5.76	6.08	6.40
20	.64	.96	1.28	1.60	1.92	2.24	2.56	2.88	3.20	3.52	3.84	4.16	4.48	4.80	5.12	5.44	5.76	6.08	6.40
21	.65	.98	1.30	1.63	1.95	2.28	2.60	2.93	3.25	3.58	3.90	4.23	4.55	4.88	5.20	5.53	5.85	6.18	6.50
22	.65	.98	1.30	1.63	1.95	2.28	2.60	2.93	2.25	3.58	3.90	4.23	4.55	4.88	5.20	5.53	5.85	6.18	6.50
23	.65	.98	1.30	1.63	1.95	2.28	2.60	2.93	3.25	3.58	3.90	4.23	4.55	4.88	5.20	5.53	5.85	6.18	6.50
24	.66	.99	1.32	1.65	1.98	2.31	2.64	2.97	3.30	3.63	3.96	4.29	4.62	4.95	5.28	5.61	5.94	6.27	6.60
25	.66	.99	1.32	1.65	1.98	2.31	2.64	2.97	3.30	3.63	3.96	4.29	4.62	4.95	5.28	5.61	5.94	6.27	6.60
26	.67	1.01	1.34	1.68	2.01	2.35	2.68	3.02	3.35	3.69	4.02	4.36	4.69	5.03	5.36	5.70	6.03	6.37	6.70
27	.67	1.01	1.34	1.68	2.01	2.35	2.68	3.02	3.35	3.69	4.02	4.36	4.69	5.03	5.36	5.70	6.03	6.37	6.70
28	.68	1.02	1.36	1.70	2.04	2.38	2.72	3.06	3.40	3.74	4.08	4.42	4.76	5.10	5.44	5.78	6.12	6.46	6.80
29	.69	1.04	1.38	1.73	2.07	2.42	2.76	3.11	3.45	3.80	4.14	4.49	4.83	5.18	5.52	5.87	6.21	6.56	6.90
30	.69	1.04	1.38	1.73	2.07	2.42	2.76	3.11	3.45	3.80	4.14	4.49	4.83	5.18	5.52	5.87	6.21	6.56	6.90
31	.70	1.05	1.40	1.75	2.10	2.45	2.80	3.15	3.50	3.85	4.20	4.55	4.90	5.25	5.60	5.95	6.30	6.65	7.00
32	.71	1.07	1.42	1.78	2.13	2.49	2.84	3.20	3.55	3.91	4.26	4.62	4.97	5.33	5.68	6.04	6.39	6.75	7.10
33	.72	1.08	1.44	1.80	2.16	2.52	2.88	3.24	3.60	3.96	4.32	4.68	5.04	5.40	5.76	6.12	6.48	6.84	7.20
34	.73	1.10	1.46	1.83	2.19	2.56	2.92	3.29	3.65	4.02	4.38	4.75	5.11	5.48	5.84	6.21	6.57	6.94	7.30
35	.74	1.11	1.48	1.85	2.22	2.59	2.96	3.33	3.70	4.07	4.44	4.81	5.18	5.55	5.92	6.29	6.66	7.03	7.40
36	.75	1.13	1.50	1.88	2.25	2.63	3.00	3.38	3.75	4.13	4.50	4.88	5.25	5.63	6.00	6.38	6.75	7.13	7.50
37	.76	1.14	1.52	1.90	2.28	2.66	3.04	3.42	3.80	4.18	4.56	4.94	5.32	5.70	6.08	6.46	6.84	7.22	7.60
38	.77	1.16	1.54	1.93	2.31	2.70	3.08	3.47	3.85	4.24	4.62	5.01	5.39	5.78	6.16	6.55	6.93	7.32	7.70
39	.79	1.19	1.58	1.98	2.37	2.77	3.16	3.56	3.95	4.35	4.74	5.14	5.53	5.93	6.32	6.72	7.11	7.51	7.90
40	.81	1.22	1.62	2.03	2.43	2.84	3 24	3.65	4.05	4.46	4.86	5.27	5.67	6.08	6.48	6.89	7.29	7.70	8.10
41	.82	1.23	1.64	2.05	2.46	2.87	3.28	3.69	4.10	4.51	4.92	5.33	5.74	6.15	6.56	6.97	7.38	7.79	8.20
42	.84	1.26	1.68	2.10	2.52	2.94	3.36	3.78	4.20	4.62	5.04	5.46	5.88	6.30	6.72	7.14	7.56	7.98	8.40
43	.87	1.31	1.74	2.18	2.61	3.05	3.48	3.92	4.35	4.79	5.22	5.66	6.09	6.53	6.96	7.40	7.83	8.27	8.70
44	.89	1.34	1.78	2.23	2.67	3.12	3.56	4.01	4.45	4.90	5.34	5.79	6.23	6.68	7.12	7.57	8.01	8.46	8.90
45	.92	1.38	1.84	2.30	2.76	3.22	3.68	4.14	4.60	5.06	5.52	5.98	6.44	6.90	7.36	7.82	8.28	8.74	9.20
46	.95	1.43	1.90	2.38	2.85	3.33	3.80	4.28	4.75	5.23	5.70	6.18	6.65	7.13	7.60	8.08	8.55	9.03	9.50
47	.99	1.49	1.98	2.48	2.97	3.47	3.96	4.46	4.95	5.45	5.94	6.44	6.93	7.43	7.92	8.42	8.91	9.41	9.90
48	1.03	1.55	2.06	2.58	3.09	3.61	4.12	4.64	5.15	5.67	6.18	6.70	7.21	7.73	8.24	8.76	9.27	9.79	10.30
49	1.08	1.62	2.16	2.70	3.24	3.78	4.32	4.86	5.40	5.94	6.48	7.02	7.56	8.10	8.64	9.18	9.72	10.26	10.80
50	1.14	1.71	2.28	2.85	3.42	3.99	4.56	5.13	5.70	6.27	6.84	7.41	7.98	8.55	9.12	9.69	10.26	10.83	11.40
51	1.20	1.80	2.40	3.00	3.60	4.20	4.80	5.40	6.00	6.60	7.20	7.80	8.40	9.00	9.60	10.20	10.80	11.40	12 00
52	1.27	1.91	2.54	3.18	3.81	4.45	5.08	5.72	6.35	6.99	7.62	8.26	8.89	9.53	10.16	10.80	11.43	12.07	12.70
53	1.35	2 03	2 70	3.38	4.05	4.73	5.40	6.08	6.75	7.43	8.10	8.78	9.45	10.13	10.80	11.48	12.15	12.83	13.50
54	1.44	2 16	2.88	3.60	4.32	5.04	5.76	6 48	7.20	7.92	8.64	9.36	10.08	10.80	11.52	12 24	12.96	13.68	14.40
55	1.53	2.30	3.06	3 83	4.59	5 36	6.12	6 89	7 65	8.42	9.18	9.95	10.71	11.48	12.24	13.01	13.77	14.54	15.30
56	1.64	2.46	3.28	4.10	4.92	5.74	6.56	7.38	8.20	9 02	9.84	10 66	11.48	12.30	13.12	13.94	14.76	15.58	16.40
57	1.70	2.64	3.52	4.40	5.28	6.16	7.04	7.92	8 80	9 68	10.56	11.44	12.32	13.20	14.08	14.96	15.84	16.72	17.60
58	1.90	2.85	3.80	4.75	5 70	6.65	7.60	8.55	9 50	10.45	11.40	12.35	13.30	14.25	15.20	16.15	17.10	18.05	19.00
59	2.05	3.08	4.10	5.13	6.15	7.18	8.20	9.23	10.25	11.28	12 30	13 33	14.35	15.38	16.40	17.43	18.45	19.48	20 50
60	2.21	3.32	4.42	5.53	6.63	7.74	8.48	9.95	11.05	12 16	13 26	14.37	15 47	16 58	17.68	18.79	19.89	21.00	22.10
61	2.40	3 60	4 80	6.00	7.20	8 40	9.60	10.80	12.00	13.20	14.40	15 60	16 80	18.00	19.20	20.40	21 60	22.80	24.00
62	2.60	3.90	5.20	6.50	7.80	9.10	10.40	11.70	13.00	14.30	15.60	16 90	18.20	19.50	20 00	22 10	23.40	24.70	26.00
63	2.82	4 23	5.64	7.05	8.46	9 87	11 28	12.69	14.10	15 51	16.92	18 33	19 74	21 15	22.56	23 97	25 38	26.79	28 20
64	3.07	4 61	6 14	7.68	9 21	10.75	12 28	13 82	15 35	16.89	18 42	19 96	21.49	24 03	24.56	26.10	27 63	29.17	30.70
65	3 35	5.03	6 70	8 38	10 05	11 73	13.40	15.08	16 75	18 43	20.10	21 78	23 45	25.13	26.80	28.48	30 15	31.83	33.50

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3. That the insurance has been granted will be evidenced by a policy or policies issued by the bureau, which shall be in the following general form (which form may be changed by the bureau from time to time, provided that full and exact terms and conditions thereof shall not be altered thereby):

[Form of policy for $5,000.]

MILITARY AND NAVAL INSURANCE POLICY

No. 1

Amount, $5,000. Age, 25.
Monthly installments, $28.75.

THE UNITED STATES OF AMERICA
TREASURY DEPARTMENT
BUREAU OF WAR-RISK INSURANCE

Under the authority granted by Congress in an act amending "An act entitled 'An act to authorize the establishment of a Bureau of War-Risk Insurance in the Treasury Department,' approved September 2, 1914, and for other purposes," approved October 6, 1917, and subject in all respects to the provisions of such act, of any amendments thereto, and of all regulations thereunder, now in force or hereafter adopted, all of which, together with this policy, the application therefor, and the terms and conditions published under authority of the act, shall constitute the contract:

Hereby insures from and after the —— day of ———, 19—, John Doe, of Illinois, private, Company A, Third Infantry, conditioned upon the pay-

(Name, State of residence, and designation of the insured.)

ment of premiums as herein provided, for the principal amount of $5,000, converted into monthly installments of $28.75 (the equivalent, when paid for 240 months, of the sum insured, on the basis of interest at the rate of 3½ per cent. per annum) payable

To the insured, if he/she, while this insurance is in force, shall become totally and permanently disabled, commencing with such disability as established by the award of the director of the bureau and continuing during such disability; and

To the beneficiary or beneficiaries hereinafter designated, commencing upon the death of the insured, while the insurance is in force, and (except as otherwise provided) continuing for 240 months if no installments have been paid for total and permanent disability or, if any such installments have been paid, then for a number of months sufficient to make 240 in all:

To Sarah Doe, wife of the insured;

If no beneficiary within the permitted class be designated by the insured, either in the insured's lifetime or by his last will and testament, or if any above designated beneficiary is or becomes disqualified, or does not survive the insured, the insurance (or if any above designated beneficiary shall survive the insured, but shall not receive all the installments, then the remaining installments) shall be payable to such person or persons within the per-

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mitted class of beneficiaries as would under the laws of the insured's place of residence be entitled to his personal property in case of intestacy.

If the insured became totally and permanently disabled before this policy was applied for, it shall nevertheless be effective as life insurance, but not as insurance against such disability.

This policy is not assignable, and payments thereunder to the insured or a beneficiary are not subject to claims of creditors of the insured or beneficiary.

The insured may at any time, subject to the regulations of the bureau, change the beneficiary or beneficiaries to any person or persons within the classes permitted by the act, without the consent of the beneficiary or beneficiaries.

Upon the written request of the insured, accompanied by this policy for indorsement, or after his/her death, upon request of a beneficiary at the time of making claim, the insurance payable to any beneficiary may be converted into installments of reduced amounts payable for 240 months certain and for as much longer as such beneficiary shall survive, such installments to be computed in accordance with the American Experience Table of Mortality and 3½ per cent. interest.

Premiums shall be paid monthly on or before the last day of each calendar month and will, unless the insured otherwise elects in writing, be deducted from any pay due him/her from the United States or deposit by him/her with the United States, and, if so to be deducted, a premium when due will be treated as paid, whether or not such deduction is in fact made, if upon the due date the United States owe him/her on account of pay or deposit an amount sufficient to provide the premium, provided that the premium may be paid within 31 days after the expiration of the month, during which period of grace the insurance shall remain in full force. If any premium be not paid, either in cash or by deduction as herein provided, when due or within the days of grace, this insurance shall immediately terminate, but may be reinstated within six months upon compliance with the terms and conditions specified in the regulations of the bureau.

If the age of the insured has been misstated, the amount of insurance shall be adjusted at the amount not in excess of $10,000 which the premium actually paid would purchase at the insured's attained age.

During the present war and for not more than five years thereafter, or until the earlier conversion of this policy as hereinafter provided, the monthly premium shall be in accordance with the following table of rates, increasing at each anniversary of the policy to the rate for his/her then attained age:

Not later than five years after the war this policy, if written request be made to the bureau therefor, accompanied by this policy, will be converted without medical examination into any form of insurance selected from among those that may be prescribed by regulations of the bureau. Such converted insurance will be at net premiums, computed in accordance with the American Experience Table of Mortality and 3½ per cent. interest per annum and will provide for cash, loan, paid-up, and extended insurance values.

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TABLE OF PREMIUMS FOR $5,000
(Ages 15 to 65)

Attained age	Monthly rate	Attained age	Monthly rate
15	$3.15	41	$4.10
16	3.15	42	4.20
17	3.15	43	4.35
18	3.20	44	4.45
19	3.20	45	4.60
20	3.20	46	4.75
21	3.25	47	4.95
22	3.25	48	5.15
23	3.25	49	5.40
24	3.30	50	5.70
25	3.30	51	6.00
26	3.35	52	6.35
27	3.35	53	6.75
28	3.40	54	7.20
29	3.45	55	7.65
30	3.45	56	8.20
31	3.50	57	8.80
32	3.55	58	9.50
33	3.60	59	10.25
34	3.65	60	11.05
35	3.70	61	12.00
36	3.75	62	13.00
37	3.80	63	14.10
38	3.85	64	15.35
39	3.95	65	16.75
40	4.05		

Wherefore the United States of America has caused this policy to be signed by the Secretary of the Treasury and by William C. De Lanoy, the Director of the Bureau of War-Risk Insurance, and countersigned by the registrar or an assistant registrar of the bureau.

W. G. MCADOO,
Secretary of the Treasury.

WILLIAM C. DE LANOY,

Director of the Bureau of War-Risk Insurance.

Countersigned at Washington, D. C., this ——— day of ———, 19——.

Registrar.

4. Persons entitled to apply for this insurance are—

(1) A commissioned officer (including a warrant officer) in active service in the military or naval forces of the United States.

(2) Any person, male or female, enlisted, enrolled, or drafted into active service in the military or naval forces of the United States, including non-

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commissioned and petty officers and members of training camps authorized by law.

The term "military or naval forces" means the Army, the Navy, the Marine Corps, the Coast Guard, the Naval Reserves, the National Naval Volunteers, and any other branch of the United States service while serving pursuant to law with the Army or the Navy.

(3) Any member of the Army Nurse Corps (female) or of the Navy Nurse Corps (female) while employed in active service under the War Department or Navy Department, respectively.

5. Insurance may be applied for in favor of one or more of the following persons with sum of $500 or a multiple thereof for each beneficiary, the aggregate not exceeding the limit of $10,000 and not less than $1,000 upon any one life:

Husband or wife.

Child, including legitimate child; child legally adopted before April 6, 1917, or more than six months before enlistment or entrance into or employment in active service, whichever date is the later; stepchild, if a member of the insured's household; illegitimate child, but, if the insured is his father, only if acknowledged by instrument in writing signed by him, or if he has been judicially ordered or decreed to contribute to such child's support, and if such child, if born after December 31, 1917, shall have been born in the United States or in its insular possessions.

Grandchild, meaning a child, as above defined, of a child as above defined.

Parent, including father, mother, grandfather, grandmother, stepfather, and stepmother, either of the insured or of his/her spouse.

Brother or sister, including of the half blood as well as of the whole blood, stepbrothers and stepsisters and brothers and sisters through adoption.

Unless other designation is made by the insured, such person or persons, within the permitted class of beneficiaries, as would under the laws of the place of residence of the insured be entitled to his personal property in case of intestacy shall be deemed designated as the beneficiary or beneficiaries to whom shall be paid any installments remaining unpaid upon the death, or disqualification under the provisions of the act, of any named beneficiary.

In case the applicant does not desire the premium to be deducted from his/her pay (or his/her deposit) he/she should so elect in writing at the time of making application; but if no election is made it shall have the effect to provide for such deduction from his/her pay, or if such pay be insufficient, any balance from his/her deposit.

7. Applications for insurance are to be made upon the blanks provided by the bureau, but any writing sufficiently identifying the applicant and specifying the amount of insurance shall be deemed sufficient. Upon request of the bureau, however, the applicant shall fill out and sign the proper blank as of the original date.

8. If a signed writing requesting insurance for less than $4,500 is mailed

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or delivered before the 12th day of February, 1918, to the Bureau of War-Risk Insurance, Washington, D. C., or to any branch thereof or to any officer of the United States authorized to receive the same, such insurance, in the absence of other specification in such writing, shall be and be deemed applied for and the contract made on such 12th day of February, 1918, the provisions of section 401 as to automatic insurance meanwhile continuing in full force; if so mailed or delivered on or after such day, or if for $4,500 or more, though mailed or delivered before such day, the insurance shall, in the absence of other specification in such writing, be and be deemed applied for and the contract made on the day of mailing or delivery.

9. These terms and conditions are subject in all respects to the provisions of such act and of any amendments thereto and of all regulations thereunder now in force or hereafter adopted.

WILLIAM C. DE LANOY,

Director of the Bureau of War-Risk Insurance.

WASHINGTON, D. C.,
October 15, 1917.

Muster of officers and enlisted men who are in hospital, on guard, outpost duty, etc. (General Orders, No. 49, April 28, 1917.)

II. 1. Officers and enlisted men sick in hospital on the last day of the month may be mustered by the surgeon; those on guard and in confinement on the last day of the month may be mustered by the officer of the day. In such cases the surgeon and the officer of the day, respectively, will furnish the officers designated to muster companies and detachments with lists of the names of officers and enlisted men mustered by them. Detachment muster rolls are not required for officers and enlisted men mustered by the surgeon or the officer of the day under the provisions of this order.

2. Enlisted men at subposts or on outpost or other similar duty may be mustered by telephone when it is impracticable for them to report in person to the mustering officer. In such cases the stations and duties of the men on the date of muster, and the words "Mustered by telephone," will be entered in the column for "Remarks." (2581942, A.G.O.)

GENERAL ORDERS,
No. 121.

WAR DEPARTMENT,
WASHINGTON, *September* 16, 1917.

General Orders No. 92, War Department, 1909, as amended by Generai Orders, No. 216, 1909; No. 3, 1912; No. 78, 1914; Circular No. 92, 1909; Circulars Nos. 3 and 12, 1910, War Department, is rescinded and the following substituted therefor:

1. The War Department Correspondence File, or the abridgment thereof, is designated as the system of correspondence and filing for use in all offices and bureaus of the War Department excepting the Insular Bureau, and at

See Appendix II—581a.

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headquarters of departments, districts, coast defenses, posts, cantonments, and of all regiments and higher units.

The War Department Correspondence File is a subjective decimal classification for arranging and filing correspondence of the military establishment. The abridgment is arranged for use in the field and in the smaller offices of record. The abridgment should also be used in connection with the original edition of the classification in all offices provided with the latter, pending the preparation and distribution of a complete revision of the War Department Correspondence File.

This system of filing will be installed at headquarters of divisions, brigades and divisional cantonments and camps upon receipt of this order. It will be installed at other headquarters and in all offices and bureaus of the War Department, excepting the Insular Bureau, as rapidly as equipment becomes available.

2. Filing Equipment for Use in the Field

The following is the allowance of filing equipment for the various offices in the field:

Vertical Filing Drawers.—Letter size, each drawer a separate unit manufactured so that one drawer will fit on top of another.

Guide Cards.—Made of cardboard, letter size with tabs of five positions and bottom tab punched for round rods.

Folders.—Manila one-half inch shorter than guide cards with tabs of two divisions.

Fasteners.—Acco or similar for binding papers together.

18271°—17
Recd. C. S. O. Cp. Stanley, Tex.

Punches.—Marvel or similar for punching papers.

Cross-reference Sheets.—Printed or mimeographed form.

Sets of Rubber Type.—Box containing figures, 0 to 9, one-half dozen of each figure in two styles of type—one-half type ½ inch high and one-half type ¼ inch high.

Allowance for Division Adjutant's Office

3 months' supply	6 months' supply	Equipment and supplies
12	.....	Filing drawers.
200	300	Guide cards.
2,000	3,000	Folders.
500	800	Fasteners.
2	.....	Punch.
2,000	3,000	Cross-reference sheets.
1	.....	Set rubber type.

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ALLOWANCE FOR DIVISION QUARTERMASTER'S OFFICE

12	.....	Filing drawers.
200	300	Guide cards.
2,000	3,000	Folders.
500	800	Fasteners.
2	.....	Punch.
2,000	3,000	Cross-reference sheets.
1	.....	Set rubber type.

ALLOWANCE FOR BRIGADE HEADQUARTERS

4	.....	Filing drawers.
100	100	Guide cards.
1,200	1,800	Folders.
300	500	Fasteners.
1	.....	Punch.
1,200	1,800	Cross-reference sheets.
1	.....	Set rubber type.

ALLOWANCE FOR CANTONMENT HEADQUARTERS

16	.....	Filing drawers.
300	500	Guide cars.
2,500	3,500	Folders.
500	800	Fasteners.
3	.....	Punch.
2,500	3,500	Cross-reference sheets.
2	.....	Set rubber type.

ALLOWANCE FOR CAMP SUPPLY DEPOT AT DIVISIONAL CANTONMENTS

3 months' supply	6 months' supply	Equipment and supplies
48	.....	Filing drawers.
800	1,200	Guide cards.
8,000	12,000	Folders.
2,000	3,000	Fasteners.
8	.....	Punch.
8,000	12,000	Cross-reference sheets.
4	.....	Set rubber type.

The necessary vertical filing drawers, punches, and rubber type, for the installation and operation of this system at division, brigade, and cantonment headquarters, will be furnished by the Quartermaster General of the Army without requisition.

The equipment indicated above for division and brigade headquarters is considered sufficient for field service, and the quantity will not be increased. *Correspondence at division and brigade headquarters will be reduced to actual necessities in order to keep the volume of records down to a minimum. To this end, in the transaction of business, verbal instructions will be issued instead of written instructions whenever practicable.*

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Such additional equipment as may be necessary for the semi-permanent offices at cantonments and other field offices will be obtained by requisitions.

A three months' supply and, in addition thereto, a six months' supply of guide cards, folders, cross-reference sheets and fasteners will be furnished by the Quartermaster General of the Army without requisition to the cantonments specified in General Orders, No. 95, War Department, 1917. Additional supplies required will be obtained by requisition.

3. Offices in which Files will be Installed

One file in the division adjutant's office, which shall accommodate the records of the division adjutant, division judge advocate, division inspector, and division surgeon. The division adjutant will coördinate the work of record keeping for these offices and, by concerted action, arrange with the staff officers concerned for the use of their clerks for this purpose.

One file in the division quartermaster's office.

One file in each brigade headquarters when the brigade forms part of a division. When a brigade is independent and operating with a brigade staff similar to a division, two files will be operated as provided above for a division.

One file in the divisional cantonment headquarters. The records of the cantonment must be kept in a separate file from those of the divisions at the cantonments. The division records will accompany the division when it moves, but the cantonment records will remain at the cantonment.

One file in the office of the camp quartermaster at the divisional camp supply depot. A sufficient number of filing drawers and other equipment has been provided to operate a central file at the depot or separate files for each division of the office.

Other field offices operated independently will file their records in the central file at the local headquarters, if practicable. If not, they will operate separate files, securing the equipment from the headquarters.

4. Complete instructions for the operation of the prescribed filing system and the classification of subjects and index thereof are contained in the War Department Correspondence File abridgment, which may be secured on application to the office of The Adjutant General of the Army.

5. A complete revision of the War Department Correspondence File is now being prepared by the Board of Correspondence and Filing in the office of The Adjutant General of the Army, and all suggestions for improvement of the system should be transmitted without delay to that board.

[313.215, A.G.O.]

By order of the Secretary of War:

H. L. SCOTT,
Major General, Chief of Staff.

Official:
H. P. McCAIN,
The Adjutant General.

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The following letter, blank forms, etc. were prepared for use in this book under the supervision of Lieut. Colonel R. W. Metcalfe, M. C.

See Par. 40 M. M. L.

BASE HOSPITAL NO.1,
Fort Sam Houston, Texas.
June 12, 1917.

From: The Commanding Officer.

To: The Department Surgeon, Southern Department.

Subject: Thomas Brown.

1. Request authority to enlist the above named man for the medical department. Special qualifications - nurse.

John Smith,
Major, Medical Corps.

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See Pa. 840 - 863 A.R.

Brown (Surname.) Thomas (Christian name.)

PHYSICAL EXAMINATION FOR ENLISTMENT

*Regular Army. *Volunteer Army.

*Regular Army Reserve. *Enlisted Reserve Corps.

Accepted June 20, 1917.

at Fort Sam Houston, Texas.

*Enlisted / *Inducted June 20, 1917.

at Fort Sam Houston, Texas.

* Strike out the words not applicable.

INSTRUCTIONS.

1. The name, date, and place of acceptance, page 1, the statement of applicant, page 2, and first physical examination report, pages 2 and 3, will be filled out at the time of the applicant's examination for acceptance. The remainder of the report will be filled out at the time of his final examination preliminary to enlistment or rejection, as the case may be. The questions on page 2 will be asked before the applicant has been stripped, and any answer indicating a possible cause of rejection will be followed up by searching inquiry and examination and the result will be noted on the report.

2. The greatest care will be taken that the name of the applicant is correctly shown and that it corresponds with the name on his enlistment paper. The Christian name must not be abbreviated, but if it consists of more than one name, only the first will be written and signed in full.

3. Under the heading "Remarks," on pages 3 and 4, will be noted any authorized special assignment or waiver of defects, the nature of the authority being stated. The space under "Remarks" will also be used for continuation of an answer for which the allotted space is insufficient and for any further statement that the examining officer may desire to make.

4. The physical examination will conform strictly to the provisions of the rules for the examination of recruits. Deviations from normal, though not cause for rejection, will be noted under proper headings. Syphilis as indicated by a positive Wassermann is not cause for rejection, if other requirements are met. Syphilitics with open lesions or mental symptoms are subjects for rejection.

5. When the applicant is enlisted, the completed physical examination report will be forwarded to The Adjutant General of the Army by the recruiting officer with his trimonthly report. When the applicant is rejected, the report will be marked "Rejected" at the top of the first page or brief, and, except in case of applicants with prior military or naval service, will be filed at place of rejection. The report in case of rejected applicant with prior service will be forwarded to The Adjutant General with the trimonthly report.

Form No. 135, A. G. O.
Ed. Mar. 10-17—1,000,000.

8—1235

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(2)

STATEMENT OF APPLICANT.

Have you found that your health and habits in any way interfere with your success in civil life? And if so, give details: No

Have you ever since childhood wet the bed when asleep? No

Do you consider that you are now sound and well? Yes

What illnesses, diseases, or accidents have you had since childhood? malarial fever 1915

Have you ever had any of the following? If so, give approximate dates:

Spells of unconsciousness or convulsions: No

Gonorrhea: No Sore on penis: No

Have you ever raised or spat up blood? No

When were you last treated by a physician, and for what ailment? malarial fever 1915

Have you ever been under treatment at a hospital or asylum, and, if so, for what ailment? 1915 for malarial fever

I certify that the foregoing questions and my answers thereto have been read over to me; that I fully understand the questions, and that my answers thereto are correctly recorded and are true in all respects.

I further certify that I have been fully informed and know that if I secure my enlistment by means of any false statement or misrepresentation I am liable to court-martial for fraudulent enlistment.

Thomas Brown
(Signature of applicant.)

PHYSICAL EXAMINATION AT PLACE OF ACCEPTANCE.*

(Applicant stripped. See instruction 4.)

Weight, ... lbs.; height, ... inches.

Eyes: .....

Vision—Right eye, ...; left eye, ...

Ears: .....

Hearing—Right ear, ...; left ear, ...

Girth of chest (at nipples): At expiration, ... inches.

At inspiration, ... inches.

Flat foot: .....

*3—1235

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Remarks: .....

.....

.....

I certify that I have personally examined the applicant, and that, to the best of my knowledge and belief, he fulfills the physical and legal requirements for enlistment.

.....

.....
Recruiting Officer.

.....
(Place.)

.....
(Date.)

* If the applicant is enlisted at place of acceptance, this report will not be filled out, except where examination at place of enlistment is made by a civilian physician.

PHYSICAL EXAMINATION AT PLACE OF ENLISTMENT.

(Applicant stripped. See instruction 4.)

Weight, 160 lbs.; height, 69 inches.

Girth of chest (at nipples): At expiration, 36 inches.

At inspiration, 39 inches.

General examination (head, chest, abdomen, extremities): .....

.....

Normal

.....

.....

Nose and throat: .....

.....

Normal

Heart: .....

.....

Normal

Genito-urinary organs (urine will be examined in suspicious cases):

.....

Normal

Hernia: No

.....

.....

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(4)

Hemorrhoids: No

Flat foot or other deformities of feet: No

Wassermann reaction (Regular Army only): Minus

Eyes:

Vision—Right eye, 20/20; left eye, 20/20

Ears:

Hearing—Right ear, 20/20; left ear, 20/20

Teeth:

		Right.								Left.							
Missing Teeth:	Upper.	8	7	6	~~5~~	4	3	2	1	1	2	~~3~~	4	5	6	7	8
	Lower,	3	7	~~6~~	5	4	3	2	1	1	2	3	4	5	6	~~7~~	8

(Strike out those that are missing.)

Remarks: No defects

I certify that I have carefully examined the applicant, and have correctly recorded the results of the examination, and that, to the best of my judgment and belief, * he has no mental or physical defect disqualifying him from service in the United States Army; ~~* he is disqualified from service in the United States Army by reason of~~

William Smith
1st Lt., M.C. Medical Corps.

Fort Sam Houston, Texas.
(Place.)

June 20, 1917.
(Date.)

* Strike out clause not applicable.
Additional sheets for indorsements or remarks, if required, will be attached here.

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Pa. 840-863 G. P.

*Regular Army. ~~*Volunteer Army.~~
*Regular Army Reserve. ~~*Enlisted Reserve Corps.~~

ENLISTMENT PAPER.

Brown, Thomas
(Surname.) (Christian name.)†

Residence 324 Ash Street
(Street and house number; if none so state.)

Trenton, New Jersey
(Town or city.) (State.)

Enlisted at Fort Sam Houston, Texas

on the 20th day of June, 1917.

by 1st Lt. William Smith, M.C.

for Medical Department *white ~~colored~~.
(Company and regiment, or arm, or corps, or department.)

*Strike out words not applicable.) †See instruction 3.

Last service in Regular Army:

Co. "L", 20th Infantry
(Company and regiment, or arm, or corps, or department.)

Discharged June 1, 1917.

INSTRUCTIONS.

1. One original enlistment paper only will be made in the case of a soldier enlisted or reenlisted for the Army. It will be forwarded directly to The Adjutant General of the Army, with the recruiting officer's trimonthly report. Retained copies of enlistment paper where required under regulations and instructions of the War Department will each be marked "copy" at top of first page or brief.

2. The name, residence, and last service in the Army, page 1, the declaration of the applicant and, when applicant is under 18 years of age, the consent in case of minor, will be filled out at the station where the applicant is accepted for enlistment. The remainder of the enlistment paper will be filled out at the depot, post, or station at which he is enlisted.

3. The correct name of the applicant will be ascertained. The Christian name will not be abbreviated, but if it consists of more than one name, only the first will be written and signed in full. Great care will be exercised that the name is correctly written and signed wherever it appears on the enlistment paper.

4. In case the applicant for enlistment or reenlistment is not a citizen of the United States, the declaration will be amended by striking out the words "I am a citizen of the United States," and adding on the blank lines above the signature the words "I made legal declaration of my intention to become a citizen of the United States on the ..... day of .....,
191 , in .....
(Name of court.)

If, in case of reenlistment, the applicant is not a citizen of the United States and has not made legal declaration to become a citizen, the word "not" will be interpolated before the word "citizen," in the declaration.

5. In case the applicant is a married man the words "I have neither wife nor child and" will be stricken out and a note added above the signature showing the conjugal condition of the applicant and the number of children if any. If anyone is dependent upon him for support, the words "and no one is dependent upon me for support" will be stricken out and the names of those dependent upon the applicant will be inserted on the blank line above the signature.

6. In case of enlistment other than for the Regular Army the Declaration of Applicant, Oath of Enlistment, and Consent in Case of Minor will be amended as follows:

(a) For Volunteer Army, strike out the words "and four years in the Regular Army Reserve."

(b) For Regular Army Reserve, strike out the words "three years in active service and."

(c) For Enlisted Reserve Corps, strike out the words "three years in active service and" and substitute the words "Enlisted Reserve Corps" for the words "Regular Army Reserve."

This form will not be used for enlistments in the National Guard.

Form No. 22, A. G. O. 03—310
Ed. Mar. 17-17—100,000.

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DECLARATION OF APPLICANT.

(In case of enlistment other than for Regular Army, see Instruction 6.)

Desiring to enlist in the Army of the United States for the period of three years in the active service and four years in the Regular Army Reserve, I declare that:

1. I am a citizen of the United States (see Instruction 4), am *white-~~[illegible]~~, *and of legal age to enlist.

2. I have neither wife nor child (see Instruction 5), and no one is dependent upon me for support (see Instruction 5).

3. I am of good character and habits in all respects; have never been convicted of a felony, nor imprisoned under sentence of a court in a reformatory, jail, or penitentiary; and have never been discharged from the service (Army or Navy) of the United States or any other service on account of disability or through sentence of either a civil or military court, nor discharged from any service, civil or military, except with good character, and for the reasons given by me to recruiting officer.

4. My last enlisted service was in the *~~Regular Army, *Volunteer Army, *National Guard, *Navy, *Marine Corps,~~

from which I was discharged June 1, 191 7

5. ~~I have never served in the *Regular Army, *or Volunteer Army, *or National Guard, *or Navy, *or Marine Corps, and~~ I am not now a member of the the National Guard of any State, Territory, or the District of Columbia.

6. ~~*I have never previously applied for enlistment. *I applied for enlistment at~~

~~191 , and was rejected because of~~

7. I have been fully informed and know that if I secure my enlistment by means of willful misrepresentation or concealment as to my qualifications for enlistment I am liable to trial by court-martial for fraudulent enlistment, and I also know that if I am rejected by reason of any disqualification known to me and concealed from the accepting officer I will not be furnished with return transportation to the place of acceptance.

Given at Fort Sam Houston, Texas
(Place of acceptance.)

this 20th day of June, 191 7.

Thomas Brown
(Signature of applicant.)

Accepted for enlistment

William Smith,

1st Lt., M.C.
Recruiting Officer.

*Strike out words not applicable. 03—210

NOTE.—The declaration of applicant after being filled out and corrected will be read and, if necessary, explained to him by the recruiting officer.

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OATH OF ENLISTMENT.

(In case of Enlistment other than for Regular Army, see Instruction 6.)

THE UNITED STATES OF AMERICA,

STATE OF Texas } ss:
City, Town, or Military Post, Fort Sam Houston }

I, Thomas Brown, born in Trenton, (Town or city.) New Jersey (State or country.)
aged 26 years and 5 months, and by occupation a soldier, do hereby acknowledge to have voluntarily enlisted this 20th day of June, 1917, as a soldier in the Army of the United States of America for the period of three years in the active service and four years in the Regular Army Reserve under the conditions prescribed by law, unless sooner discharged by proper authority; and do also agree to accept from the United States such bounty, pay, rations, and clothing as are or may be established by law. And I do solemnly swear (or affirm) that I will bear true faith and allegiance to the *United States of America;* that I will serve them honestly and faithfully against all their enemies whomsoever; and that I will obey the orders of the President of the United States, and the orders of the officers appointed over me, according to the Rules and Articles of War.

Thomas Brown
(See Instruction 3.)

Subscribed and duly sworn to before me this 20th day of June, A. D. 1917.

William Smith,
1st Lt., M.C.
Recruiting Officer.

29—810

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CERTIFICATE OF ENLISTMENT.

I CERTIFY that this soldier was minutely inspected by me previous to his enlistment; that he was entirely sober when he enlisted; that to the best of my judgment and belief he fulfills all legal requirements; that I have enlisted him into the service of the United States under this enlistment contract, and in doing so have strictly observed the regulations which govern the recruiting service.

He has blue eyes, m. brown hair, fair complexion, and is 5 feet 9 inches in height. He gave the name and address of the person to be notified in case of emergency as

William Brown (father)
(Name and degree of relationship; if friend, so state.)

324 Ash Street
(Street and house number; if none, so state.)

Trenton, New Jersey
(Town or city.) (State or country.)

William Smith
1st Lt. M. C. *Recruiting Officer.*

CONSENT IN CASE OF MINOR UNDER 18 YEARS.

(In case of enlistment other than for Regular Army, see Instruction 6.)

I CERTIFY that I am the *father–*mother–*legal guardian of .....; that he is .....years of age; and I do hereby freely give my consent to his enlisting as a soldier in the Army of the United States for the period of three years in active service and four years in the Regular Army Reserve under the conditions prescribed by law.

Given at.....

this ..... day of ....., 191

.....
(Signature of person giving consent.)

.....
(Signature of witness.)

Consent verified.....
Recruiting Officer.

*Strike out words not applicable. 23—210

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Pa. 840-863 9.P

TRIMONTHLY REPORT OF ENLISTMENTS AT Ft. Sam Houston, Texas.

for the 10 days ending June 10, 1917.

ARM OF SERVICE.	Number of recruits disposable at date of last report.	Number of recruits enlisted during the trimonthly period.		Total number of recruits to be accounted for.	Forwarded to organizations.	Deserted.				Total number of recruits disposable at date of report.	Number of Applicants Rejected and Specification of Cause.							REMARKS.
											Minors.	Under size.	Aliens.	Illiterates.	Other causes.		Total number rejected.	
Infantry, white	0	2		2	2					0		1		1			2	
Coast Artillery																		
Engineers																		
Cavalry, white																		
Field Artillery																		
Infantry, colored																		
Cavalry, colored																		
Post N. C. staff { white																		
Post N. C. staff { col'd																		
Ordnance detachments																		
Signal Corps																		
Medical Dept. { white																		
Medical Dept. { col'd																		
Q. M. Corps { white																		
Q. M. Corps { colored																		
Army Reserve																		

Notes.—1. All applicants rejected should be reported; those rejected at sight under "Other causes."
2. The reports from recruit depots and depot-posts will be signed by the commanding officer. (Circular 41, War Dept., 1908.)

John Smith,
Captain, Medical Corps.
Recruiting Officer. (See Note 2.)

FORM No. 18, A. G. O.
Ed. Sept. 26-16—20,000.

3—2004

(OVER.)

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TRIMONTHLY REPORT

OF

ENLISTMENTS

At Ft. Sam Houston, Texas

for the 10 days ending

June 10, 1917.

By John Smith,

Captain, Medical Corps.

Recruiting Officer.

2 *Enlistment papers inclosed.*

Note.—This report, properly briefed and accompanied by the enlistment paper of every man enlisted or reenlisted for the Army during the period covered by the report, will be forwarded promptly to The Adjutant General of the Army at the close of business on the 10th, 20th, and last day of every month from each garrisoned post or station, including recruit depots and depot-posts, whether any enlistments have been made during the trimonthly period or not. 3—2004

Recruits Forwarded to Organizations or Posts During the Trimonthly Period.

Number of men.	Organization.	Destination and date of departure. 1917.	*Authority. (A. G. O., Dept. Comdr., or A. R. 840 and 877.)
2	19th Inf.	Ft. Sam Houston Tex. June 9/17	AR 840

*When the authority is from A. G. O. or Dept. Comdr. give date thereof.

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See G.R 1411

Form 48
MEDICAL DEPARTMENT, U. S. ARMY
(Revised Apr. 24, 1916)

Base Hospital No. 1, Fort Sam Houston, Texas,

June 18, 1917

From: The Surgeon,

To: The Commanding General, Southern Department.

Subject: Transfer of an enlisted man to the ~~Hospital Corps~~ Medical Department.

The transfer of Private George W. Fox, Co. "G", 19th Infantry
to the Medical Department and his assignment to duty at this post is recommended, to fill vacancy caused by existing vacancies.
(If there is no vacancy, and transfer is desired for general service, so state.)

Date of present enlistment January 21, 1917.

Previous service in Army, Navy, or Marine Corps None
(Give years and organizations)

Character and habits (particularly as to use of alcoholic stimulents, drugs, etc.) Soldier states that he does not use drugs or alcoholic liquors.

Physical condition Good.
(Specify marked defects, if any.)

Knowledge of the English language—reading and writing Good.

General intelligence and aptitude for the Medical Department Has had one year experience as nurse in the Cook County Hospital, Chicago, Illinois.
(Add here any special qualifications.)

R.F. Metcalf

Major, Medical Corps., U. S. Army.

I desire transfer to the Medical Department; am not married; and am 23 years and 6 months of age.

George W. Fox

Private, Co. "G", 19th Infantry

8—3779

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*Regular Army. *Volunteer Army

*Regular Army Reserve. *Enlisted Reserve Corps

*National Guard, State of

SERVICE RECORD

OF

Early, John
(Surname.) (Christian name.)

Medical Department
(Company and regiment or arm or corps or department for which enlisted.)

* Strike out words not applicable.

INSTRUCTIONS.

1. *Opening of record.*—When a soldier is enlisted or reenlisted a service record on this form will be opened for him by the recruiting officer, who will fill out the Descriptive List, page 2, the Prior Service, and the first part of Current Enlistment, page 3. Other data called for by the printed headings or by these instructions will be supplied from time to time as occasion arises by the soldier's company or detachment commander, care being taken to make the record complete and to keep it up to date at all times.

2. *Forwarding to first station.*—When a soldier is sent from the recruit depot to a post, camp, or regiment, for assignment, the adjutant, or other designated officer, at the depot will fill out the first indorsement and turn the service record over to the officer or noncommissioned officer in command of detachment of departing recruits; or, if no officer or noncommissioned officer be placed in command, the service record will be forwarded by mail to the proper commanding officer.

3. *Transmission to company.*—Upon assignment of a soldier to a company, the post, camp, or regimental commander will transmit the service record to the commanding officer of the company to which he is assigned, detaching the report of assignment and forwarding same to The Adjutant General of the Army.

4. *Soldiers transferred or detached.*—When a soldier is transferred or detached from his company, the company commander will fill out the second indorsement and transmit the service record to the soldier's new commanding officer in the manner prescribed in paragraph 2, above, in the case of soldiers leaving recruit depots. Subsequent indorsements will be filled out as the soldier's change of station or status requires, the original service record thus following the soldier wherever he goes. Each commanding officer forwarding the service record will retain an official copy of his indorsement, to which will be added the name of the soldier for purpose of identification.

5. *Data to be included in indorsements.*—Each indorsement will give the reason for the soldier's change of station or status, and his character, and will contain a full statement of his accounts at the time. Under the heading "Due United States" will be noted all authorized stoppages for loss of or damage to Government property or supplies; amounts due on account of allotment, post exchange, post laundry, tailor, company fund, or transportation; and stoppages, including detained pay, under sentence of a court-martial and on account of absence from duty because of disease resulting from the soldier's own intemperate use of drugs or alcoholic liquor, or other misconduct. In short, all information required to be entered on muster roll and pay roll will be incorporated in the indorsement on the service record, the wording of the indorsement conforming to model remarks for such rolls prescribed by the War Department.

6. *Soldiers furloughed to reserve.*—When a soldier is furloughed to the reserve, his service record will be forwarded by indorsement to the officer charged with keeping his records as a reservist. If the soldier is detached from his company at the time he is furloughed to the reserve, a copy of the indorsement forwarding the service record will be furnished his former company commander without delay.

7. *Soldiers discharged, etc.*—When a soldier is discharged or otherwise separated from the service without being furloughed to the reserve, his service record will be closed and filed with records of his company. If he is absent from his company at the time, the officer under whom he is serving will promptly transmit the service record to the company commander for file. The service record of a soldier discharged or otherwise separated from the service while in the reserve, will be closed and filed by the officer charged with keeping the reservist's record.

8. *Record of court-martial.*—When the service record of a soldier shows a sentence by court-martial, it will be accompanied by an authenticated copy of the record of summary court-martial, or by an official copy of the order promulgating sentence in case of conviction by a general or special court-martial.

9. *Procedure in case of lost record.*—In the event that a service record is lost a report of the fact will be made to The Adjutant General of the Army, who will start a new service record, transmitting same to the recruit depot or station at which the soldier was enlisted. The new record will then be forwarded in turn to the commanding officers of the companies in which the soldier has served during current enlistment, each commanding officer repeating the indorsement required by paragraph 4, and making appropriate entries in the body of the record. Pending receipt of the new service record the soldier's pay and duty status will be determined from the data shown on the last pay roll on which his name appears, and from other records of the company or detachment with which he last served.

(Instructions continued on page 2.)

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(2)

10. *Changes in entries.*—Erasures of entries on a service record are prohibited. All changes in original entries must be made by drawing lines through the entries and each change will be duly authenticated by the signature of the officer making it, the reason for the change being stated.

11. *Additional space for entries.*—In case the space under any heading, except "Deposits" in the body of the record proves insufficient, the entry will be continued under "Remarks," page 5. If the space under "Remarks" or "Deposits" is insufficient, additional sheets will be securely pasted at the bottom of the page, as indicated by footnote. If the space for showing change of station or status in an indorsement is insufficient, the entry will be continued under "Due United States." One indorsement may, if necessary, occupy the space allotted to two. If there be more than 12 indorsements, an additional sheet will be securely pasted at the bottom of the last page of the form, as indicated by footnote. Under no circumstances will sheets or slips of paper be pasted or attached to a service record except as provided above.

12. *Initialing of entries.*—Each entry under "Military Record," pages 4 and 5, "Clothing Account," pages 6 and 7, and "Allotments," page 7, will be initialed by the recruiting officer or company commander, as the case may be. Where there are no data of record relating to a printed heading, the space under that heading will be left blank, except that in case of transfer to another organization or furlough to the reserve the company commander will insert his initials in such blank spaces to show that he has not overlooked the entries. Negative entries, such as "None," "Nothing," etc., will not be made in any part of the form except as required for street and house number and indorsements.

DESCRIPTIVE LIST.

Residence: 123 North Houston Street
(Street and house number; if none, so state.)

San Antonio, Texas.
(Town or city.) (State.)

Name and address of person to be notified in case of emergency:

(Father) William G. Early
(Name and degree of relationship; if friend, so state.)

123 North Houston Street
(Street and house number; if none, so state.)

San Antonio, Texas.
(Town or city.) (State.)

Born in New Orleans, La.
(Town or city.) (State or country.)

Age at enlistment, 29 yrs. and 6 mos.; occupation, Clerk

Eyes, Brown; hair, Dk. Brown

Complexion, Ruddy; height, 5 feet 7 inches;

Married or single: Single.

Indelible or permanent marks and physical defects at enlistment:

Front: DS 1"X ½", r. forearm; PM ¼"d.
r. breast.

Back: LS 2" r shoulder blade;
Bmk 1" X 1½", center of back.

Size of uniform shoe: 8 d.

Vaccinated: June 12, 1916; result,* Unsuccessful

Vaccinated: July 1, 1916; result,* Unsuccessful.

Typhoid immunization completed: July 7, 1916

Paratyphoid immunization completed: January 8, 1917

* Successful or unsuccessful. 3—375

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PRIOR SERVICE.

REGULAR ARMY:*

Hosp. Corps from Jun 12, 1913, to Jun 11, 1916.
(Company and regiment or corps or department.)

Discharged as Pvt. 1st cl.; character, Very Good
(Grade.)

_____ from _____, 191 , to _____, 191 .
(Company and regiment or corps or department.)

Discharged as _____; character, _____
(Grade.)

_____ from _____, 191 , to _____, 191 .
(Company and regiment or corps or department.)

Discharged as _____; character, _____
(Grade.)

_____ from _____, 191 , to _____, 191 .
(Company and regiment or corps or department.)

Discharged as _____; character, _____
(Grade.)

_____ from _____, 191 , to _____, 191 .
(Company and regiment or corps or department.)

Discharged as _____; character, _____
(Grade.)

_____ from _____, 191 , to _____, 191 .
(Company and regiment or corps or department.)

Discharged as _____; character, _____
(Grade.)

_____ from _____, 191 , to _____, 191 .
(Company and regiment or corps or department.)

Discharged as _____; character, _____
(Grade.)

*Insert headings below last discharge from the Regular Army to show service in Volunteer Army, Navy, Marine Corps, and National Guard or Organized Militia, in the order named.

CURRENT ENLISTMENT.

Serving in 2nd enlistment period.

Accepted for enlistment at Fort Sam Houston, Texas.

Enlisted June 12, 1916, at Ft. Sam Houston, Texas.

by 1st Lieut. E.A. Noyes, M.C.

Assigned to Medical department
(Company and regiment or corps or department.)

at Fort Sam Houston, Texas Jun. 12, 191 6
(Station.)

Transferred to _____; _____, 191 .
(Company and regiment or corps or department.)

Transferred to _____; _____, 191 .
(Company and regiment or corps or department.)

Furloughed to reserve at _____

_____, 191 . Character: _____

†Honorably discharged; †discharged and not recommended for reenlistment; †dishonorably discharged at _____

_____, 191 . Character: _____

†Strike out words not applicable.

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(4)

MILITARY RECORD.

Each entry on this page will be initialed. (See Instruction 12.)

W.H.S. Grade: Private 1st class, June 12, 1916.

Grade: ; , 191 .

Grade: ; , 191 .

Grade: ; , 191 .

Grade: ; , 191 .

Marksmanship, gunner, qualification or rating: *

Battles, etc.:

Wounds or other injuries received in action:

Medal of honor (action, with date thereof, for which granted):

Certificate of merit (nature of service, with date thereof, for which granted):

W.H.S. Furloughs: Aug. 2 to 22/16. (AR 106)

Time lost to be made good under A. W. 107:

(a) Absence without proper authority or in desertion.

(b) Confinement under sentence or while awaiting trial and disposition of case, if trial resulted in conviction.

(c) Unable to perform duty through the intemperate use of drugs or alcoholic liquor or through disease or injury the result of his own misconduct.

W.H.S. Dec 5 to 12/16 incl.

*Give date of qualification or rating and number, date, and source of order announcing same.

3—375

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Each entry on this page will be initialed. (See Instruction 12.)

Convictions by court-martial:

(See Instruction 8.)

W.H.S. *SC court-martial; approved Nov. 3 1916, Articles of War 62

*_____court-martial; approved_____191 , Articles of War____

*_____court-martial; approved_____191 , Articles of War____

*_____court-martial; approved_____191 , Articles of War____

*_____court-martial; approved_____191 , Articles of War____

*_____court-martial; approved_____191 , Articles of War____

*_____court-martial; approved_____191 , Articles of War____

*_____court-martial; approved_____191 , Articles of War____

*_____court-martial; approved_____191 , Articles of War____

*_____court-martial; approved_____191 , Articles of War____

* Insert word "General," "Special," or "Summary," as the case may be.

Pay detained by court-martial collected on pay roll as follows:

Month.	Amount.		Month.	Amount.	
	Dols.	Cts.		Dols.	Cts.
W.H.S. Nov., 191 6	5	00	,191		
,191			,191		
,191			,191		
,191			,191		
,191			,191		
,191			,191		

REMARKS (See Instruction 11):

W.H.S. Application for support of dependant relatives forwarded to Bureau of War Risk Insurance, Washington, D.C. Nov. 25/17.

Additional sheets for "Remarks," if required, will be attached here.

(See Instruction 11.)

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(6)

CLOTHING ACCOUNT.

Each entry on this page will be initialed. (See Instruction 12.)

CLOTHING DRAWN.

Date of Issue.	Value. Dols.	Value. Cts.	Date of Issue.	Value. Dols.	Value. Cts.
W.H.S. Jun 15/16	2	50			
W.H.S. Jul 19/16	15	50			
W.H.S. Nov 21/16	8	00			

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Each entry on this page will be initialed. (See Instructions 12.)

GRATUITOUS ISSUES OF CLOTHING.

Date of Issue.	Value.		Date of Issue.	Value.	
	Dols.	Cts.		Dols.	Cts.

CLOTHING SETTLEMENTS.

(To be made semiannually and when soldier is separated from the active service.)

Date of Settlement.	Allowance.	Money value of Clothing Drawn Since Last Settlement.	Balance Due United States.	Balance Due Soldier.
W.H.S.	Class A allotment - $15.00 per mo.			
W.H.S	Class B allotment - $ 5.00 per mo.			
W.H.S.	Govt. insurance premium - $6.60 per mo.			
W.H.S	Private insurance premiums - $5.00 per mo			

Class "E" ALLOTMENTS.

W.H.S. $ 10.00 per month for 10 months beginning with the month of April 1918; discontinued - 3rd Liberty Loan. 191 ;

$ ..... per month for ..... months beginning with the month of

..... 191 ; discontinued ..... 191 ;

$ ..... per month for ..... months beginning with the month of

..... 191 ; discontinued ..... 191 .

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(8)

DEPOSITS.

Date. 1916	Amount. Dols.	Amount. Cts.	Quartermaster.
Sep. 2	5	00	Maj. Marquart M.M.S.

1st IND.

Base Hospital No. 1, Ft. Sam Houston, Texas.
January 15, 191 7

To Surgeon, Fort Meyer, Va.

This soldier* was transf. for duty this date to above station, per SO 12, SD, Jan 14/17.

He was last paid to include Dec 31, 191 6

By Maj. P.E. Marquart
(Rank and name of quartermaster.)

Due United States (See Instruction 5); if nothing, so state:

Post Laundry, Ft. Sam Houston, Tex. 63¢.
Post Exchange, Ft. Sam Houston, Tex. $3.00

This soldier† has an allotment running.
(Has or has not.)

His character is† Very Good.

I have personally verified all entries under "Due United States."

Wm H. Smith
Captain, Med. Corps. Commanding.

2d IND.

191

To

This soldier*

He was last paid to include 191

By
(Rank and name of quartermaster.)

Due United States (See Instruction 5); if nothing, so state:

This soldier† an allotment running.
(Has or has not.)

His character is†

I have personally verified all entries under "Due United States."

Commanding.

* Give change of station or status of soldier, with number, date, and source of order.
† To be filled out in handwriting of officer signing indorsement.

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See par 260 Q. R.

Day of month.	REMARKS.	RATIONS. For Men. Plus.	RATIONS. For Men. Minus.	RATIONS. For Animals. Plus.	RATIONS. For Animals. Minus.
1	Pvt. Jared O. Butts, AWOL since May 18/17, dropped as deserter this date. Private David Patton abs in desertion since Feb 12/17, apprehended by Civ Auth Jun 12/17 and returned to mil control at this post this date. In conf. awaiting trial.	30			
6					

by Google

See Par 280 G. R.

Day of month.	STATION.	C. O.—Commissioned Officers. E. M.—Enlisted Men.	PRESENT. FOR DUTY. Captains.	First Lieutenants.	Second Lieutenants.	First Sergeants.	Q. M. and Stable Sergeants.	Sergeants.*	Corporals and Lance Corporals.	Cooks.	Mechanics.*	Musicians and Trumpeters.	Privates.*	Recruits.	On extra duty.	On special duty.	Sick.	In arrest or confinement.	Absent.	Present and absent.	Aggregate.	ANIMALS ON HAND. Horses, Public. Serviceable.	Horses, Public. Unserviceable.	Horses, Private. Serviceable.	Horses, Private. Unserviceable.	Mules. Serviceable.	Mules. Unserviceable.	SIGNATURE OF COMMANDING OFFICER.
6	Fort Sam Houston, Texas	C. O.	1	3													1		2	5								
		E. M.						4	6	3			50				3	1		69	74							Wm. H. Smith
7		C. O.																										
		E. M.																										
8		C. O.																										
		E. M.																										
9		C. O.																										
		E. M.																										
10		C. O.																										
		E. M.																										

* Chief mechanics, mechanics, farriers and blacksmiths, wagoners, saddlers, and artificers will be reported under the heading "Mechanics."

Sergeants, first class, will be reported under the heading "Sergeants;" privates, first and second class, under the heading "Privates."

3—1449

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Pa. 1315-1340 A.R.

(Fasten——here.)

Fort Sam Houston, Tex. June 30, 1917
(Station.) (Date.)

I CERTIFY that this roll is made out as required by Army Regulations, and that the entries opposite each name are correct and just. Except as otherwise stated in "Remarks," each man whose name appears on this pay roll was last paid to May 31, 1917 by Maj. P.E. Marquart, QM, USA.

Captain, Med. Corps.
Commanding Organization.

June 30, 1917
(Date.)

I CERTIFY that I have this day mustered this organization, and find all present and absent are accounted for on this roll as required by Army Regulations.

Major, Medical Corps.
Inspecting and Mustering Officer.

I CERTIFY that I witnessed the payment of this roll and that prior to the signing of this certificate each man received the amount set opposite his name, with the exception of those men marked "Not paid."

Captain, Med. Corps.
Commanding Organization.

NOTE.—This certificate to be signed only on the copy of the pay roll which bears signatures of the men for payment in cash.

I CERTIFY that this roll is a true copy of the roll upon which payment, witnessed by me, was made, excepting as to the signatures in the receipt column and the certificate as to witnessing the payment thereof.

Commanding Organization.

NOTE.—This certificate to be signed only on the copy of the roll not receipted, and which constitutes the quartermaster's retained voucher.

(Fasten——here.)

Voucher No. _____

(Name of quartermaster.)

Paid _____, 191

PAY ROLL

OF

Base Hospital No 1, (Regiment.)
(Organization.)

Fort Sam Houston, Texas.
(Station.)

For month of June, 1917

Pay of Army, 191 . . . $

Pay of Army, 191 . . . $

Pay of Army, 191 . . . $

Pay of _____, 191 , $

Amount: _____

Collections: Quartermaster's, - $ _____
Post Exchange, - $ _____
Post Laundry, - $ _____

Paid in cash, ... $ _____

TOTAL, ... $ _____

THIS ROLL NOT TO BE FOLDED.

(Fasten——here.)

Post Exchange collections hereon paid by checks dated _____, as follows:

Ft. _____, $_____, No. _____
on _____
Ft. _____, $_____, No. _____
on _____
Ft. _____, $_____, No. _____
on _____
Ft. _____, $_____, No. _____
on _____

Post Laundry collections hereon paid by checks dated _____, as follows:

Ft. _____, $_____, No. _____
on _____
Ft. _____, $_____, No. _____
on _____
Ft. _____, $_____, No. _____
on _____
Ft. _____, $_____, No. _____
on _____

(Fasten——here.)

Form 28.—Q. M. C. (Pay).
Approved by the Comptroller of the Treasury
April 8, 1912.

3—[illegible]

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Page 2.

PAY ROLL OF Base Hospital No. 26, Med. Dept. N.U.S.A. April 1, 1918, to April 30, 1918
(Organization.) (Regiment or Corps.)

NAMES, PRESENT AND ABSENT, AND RANK.	WHEN ENLISTED.	Enlistment Period.	Army Serial Number	Class "A" Allotments	Class "B" Allotments	Ins. Prems.	Second Liberty Loan. Fed. Res. Bank	Third Liberty Loan Sec. Treas.	All other Class Allots.	REMARKS.
1 HOSPITAL SERGEANT										
2 Yergey, George B.	Dec.30/13	7	804,664			10.30	10.00			
3 Aptd Hosp.Sgt.fr Sgt.1cl.Apr.1/18 per wrnt SCO,WD, same date.										
4 SERGEANTS 1ST CLASS										
5 Driscoll, Theodore G.	Jun 9/17	1	804,668			6.60				
6 Aptd Sgt. 1cl. fr Sgt.Apr.2/18 per wrnt SCO,WD, same date.										
7 Malerich, Joseph A.	Jun 17/17	1	804,666			6.70	10.00			
8 Aptd Sgt. 1cl. fr Sgt.Apr.15/18 per wrnt SCO,WD, same date										
9 SERGEANT										
10 Andersen, Roye W.	Jun 5/17	1	804,677			6.40	10.00			
11 CORPORAL										
12 Boe, Clinton E.	Jun 5/17	1	804717			6.40				
13 COOK										
14 Batters, Dell	Dec 13/17	1	804,695		15.00	7.30				
15 Aptd Cook fr Pvt. 1cl.Apr.5/18 per HO No.68 dated Apr.5/18.										
16 PRIVATES FIRST CLASS										
17 Bingham, Charles	Jun 5/17	1	804,716	15.00		6.60				
18 Graded Pvt.1cl.fr Pvt. Apr.3/18 per HO No.64 dated Apr. 3/18										
19 Jorgeson, Albert J.	Jun 4/17	1	804,693			6.60			5.00	
20 Sk not LD C045/14 fr Apr. 4 to Apr.9/18 Appl. To forfeit 2/3										
21 pay per mo for 3 mos.SC Apr.16/18										
22 PRIVATES										
23 Andersen, Douglas C.	Jun 6/17	1	804,712		15.00	6.50				
24 Due US clo. $3.76										
25										

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Page 3

[These Columns are for Use of Quartermaster Only.]

[For Use by Accounting Officers and, When Necessary, for Notations by Quartermaster and Witnessing Officers.]

(Paste along this edge.)

Post Laundry.	Post Exchange.	Allotments.	Total Amount Due.	Amount of Stoppages.	Balance Paid.	Received Payment, in Cash, of (Not to be signed in duplicate.)		C. M. Fines.	Trans. port'n.	C. C. & G. E.	Reg. Q. M. Sup'n.	Subs.	Ord-nance.
						1							
						2 George B. Yergey							
						3							
						4							
						5 Theodore G. Driscoll							
						6							
						7 Joseph A. Malerich							
						8							
						9							
						10 Roye W. Anderson							
						11							
						12 Clinton P. Boo							
						13							
						14 Dell Batters							
						15							
						16							
						17 Charles Bingham							
						18							
						19 Albert J. Jorgeson							
						20							
						21							
						22							
						23 Douglas G. Anderson							
						24							
						25							

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Page 4

	NAMES, PRESENT AND ABSENT, AND RANK.	WHEN ENLISTED.	ENLISTMENT PERIOD.	Army Serial Number	Class "A" Allotments	Class "B" Allotments	Ins Prems	Second Libty Loan FedRes Bank	Third Libty Loan Sec. Treas	All other Cl. "B" Allots.
1	Bell, William R.	Aug 14/17	1	1,140,460	15.00		6.50			
2	Deserted at Ft. McPherson, Ga. Feb. 4 /18. Apprehended by Civ. Auth. at									
3	Savannah, Ga. Mar. 9/18 and returned to mil control at this post same									
4	date. $50 reward pd for apprehension and delivery. Tried for desertion;									
5	found guilty of AWOL only; sentenced to be conf at hard labor for 3 mos									
6	and to forfeit 2/3 pay for same period, GCMO #23 SEDept Mar. 25/18.									
7	In conf serving sentence. Last pd to Jan. 31/18 by Lt. Col. Lawrence									
8	Bradish, Norman C.	Jun 9/17	1	804,720			6.50			
9	Due US clo. 41¢									
10	Buck, Junior C.	Apr 3/18	1	804,818		see remark	6.40			
11	Pay due fr enl. Due U.S., W.R.A. cl B $15.00 per mo fr Apr 3/18									
12	Casey, William R.	Aug 14/17	1	1,140,464			6.60			
13	C of M fr Apr 7/18									
14	Neilson, Otto P.	Aug 14/17	1	1,140,490			7.00			10.00
15	Joined Apr 1/18 fr Hospital Unit "Y", Med. Dept., N.A.									
16	Robertson, Stuart L.	Jun. 12/17	1	804,784						
17	Absent sk at U.S.A. Genl. Hosp. No. 6 Ft. McPherson, Ga. since Feb. 9/18.									
18	Smith, Donald S.	Dec. 10/17	1	804,791			6.50			
19	Souster, Benjamin B.	Jun. 11/17	1	804,794			6.50		5.00	
20	Absent on furlo since Apr. 7/18									
21	DISCHARGED									
22	PRIVATE									
23	Haviland, Severn T.	Jun 5/17	1	804,745						
24	Disch Apr 5/18 on CDD per 4th Ind. SEDept. Apr. 4/18									
25										

3—3498

WAR DEPARTMENT.
Form No. 366 a.
Approved by Comptroller of the Treasury Feb. 16, 1914.

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Page 5

[For Use by Accounting Officers and, When Necessary, for Notations by Quartermaster and Witnessing Officer.]

[These Columns are for Use of Quartermaster Only.]

Post Laundry.	Post Exchange.	Allotments.	Total Amount Due.	Amount of Stoppages.	Balance Paid.	Received Payment, in Cash, of (Not to be signed in duplicate.)	C. M. Fines.	Transport'n.	C. C. & G. E.	Reg. Q. M. Sup'ls.	Subs.	Ordnance.
						1 ----------						
						2						
						3						
						4						
						5						
						6						
						7						
						8 Norman C. Bradish						
						9						
						10 Junior C. Buck						
						11						
						12 William R. Casey						
						13						
						14 Otto P. Neilson						
						15						
						16 ----------						
						17						
						18 Donald S. Smith						
						19 ----------						
						20						
						21						
						22						
						23						
						24						
						25						

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	NAMES, PRESENT AND ABSENT, AND RANK.	WHEN ENLISTED.	ENLISTMENT PERIOD.	Army Serial Number	Class "A" Allotments	Class "B" Allotments	Ins. Premiums	Second Liberty Loan Fed'l Res. Bank	Third Liberty Loan Sec. Treas.	All other Cl. "B" Allots
1	RETIRED									
2	MASTER HOSPITAL SERGEANT									
3	Soekland, William C.	Aug 5/14	7	901,139						
4	Retired Apr. 7/18.Par 20, SO 145 WD Apr.29/18.									
5	DIED									
6	PRIVATE									
7	Cox, John	May 23/15	3	711,038						
8	Died Apr.13/18									
9	DESERTED									
10	PRIVATE									
11	Weiss, Joseph R.	Jun 1/16	1	1,139,344						
12	Deserted at Ft. Mc Pherson, Ga. Apr.25/18.									
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
24										
25										

3—8466

WAR DEPARTMENT.
Form No. 3466 a.
Approved by Comptroller of the Treasury Feb. 10, 1914.

See Appendix II—615a.

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3—2466 [These Columns are for Use of Quartermaster Only.]

[For Use by Accounting Officers and, When Necessary, for Notations by Quartermaster and Witnessing Officer.]

Post Laundry.	Post Exchange.	Allotments.	Total Amount Due.	Amount of Stoppages.	Balance Paid.	Received Payment, in Cash, of (Not to be signed in duplicate.)		C. M. Fines.	Trans-port'n.	C. C. & G. E.	Reg. Q. M. Sup'y.	Subs.	Ord-nance.
						1							
						2							
						3							
						4							
						5							
						6							
						7							
						8							
						9							
						10							
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						12							
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						14							
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						23							
						24							
						25							

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[redacted] • National Army. [redacted]

[redacted]

• Strike out words not applicable.

MUSTER ROLL

of Detachment Medical Department
(Company or detachment.)

of the Base Hospital No. 26,
(Regiment, corps, or department.)

at Fort Mc Pherson, Ga.
(Station at date of muster.)

from the last bimonthly muster on

February 28th, 1918,
(Month and day.)

to the muster on April 30th, 1918.
(Month and day.)

INSTRUCTIONS.

1. NAMES TO BE ENTERED ON ROLLS.

(a) **Members of the company or detachment.**—All officers and enlisted men will be taken up on the rolls from the date of receipt of notice of their assignment, whether or not they have yet joined, and will be entered in the following order: First, commissioned officers belonging to the organization, in order of rank; second, noncommissioned officers, in order of grades given in paragraph 9, A. R., 1913, the names under each grade heading appearing in the order of the dates of warrant; third, all others, except buglers, privates, first class, and privates, in alphabetical order of grade; fourth, buglers, fifth privates, first class; sixth, privates. The names of the men under each grade heading, except noncommissioned officers, will appear alphabetically. Lance corporals will be carried under the heading of privates, first class, or privates. The names and the grade headings, which will precede the names, will follow one another without interval, except when made necessary by the use of two or more lines in the column for "Remarks" after a name. In all cases the last name will be written first, e. g., Smith, John A., not John A. Smith.

(b) **Attached officers.**—The names of officers attached to a company or detachment will be entered on the rolls immediately below the names of the officers belonging thereto.

(c) **Attached enlisted men and casuals.**—The names of enlisted men attached to or casually with a company will not be borne on the rolls of such company, but on separate detachment rolls. The names of men of different regiments, fort commands, corps, or departments, will not be borne on the same detachment roll.

(d) **Those who have ceased to belong to the command.**—The names of enlisted men of a company or permanent detachment will be immediately followed by the names of those who have ceased to belong thereto since last bimonthly muster. They will be classed in the following order: (1) Discharged, (2) furloughed to the reserve, (3) transferred, (4) died, (5) retired, (6) deserted, and (7) dropped. Under each heading the names will appear in the order prescribed above for members of the company or detachment.

(e) **Soldiers discharged and reenlisted.**—The names of soldiers that have been discharged from the company or detachment since last bimonthly muster and reenlisted will be placed in the body of the roll, as well as under the heading "Discharged." See also "Desertion," par. 2 (p).

2. REMARKS.

In the column of "Remarks" opposite the name of the person concerned will be stated:

(a) **Absence of officers.**—The nature of absence and dates of departure and return, with number and source of order. **(No other remarks are required in the case of an officer, as his complete record is shown on the monthly returns.)**

(b) **Assignment.**—The date any assignment takes effect.

(c) **Date of joining.**—The date that an enlisted man joins, whether originally or from any absence, and if originally, the source of gain. See "Transfer" (m).

(d) **Change of rank or grade.**—All changes of rank or grade. In case of appointment, the number, date and source of order, or date and source of warrant, will be stated; in case of reduction, the date of receipt of order at soldier's station will also be stated.

(e) **Absence of enlisted men.**—All cases of absence of twenty-four hours or more, the nature of absence, dates of departure and return, with numbers and sources of orders, or description of authority therefor. The place of absence will also be stated except in case of furlough or absence without leave. If absent on furlough at date of muster, the period authorized will be stated. If the absence continues, the remarks on subsequent rolls will be limited to a statement of the nature and date of commencement of the absence and a reference to the first roll bearing the entry. Inability to perform duty through disease, etc. (A. W. 107), will not be noted except as provided under "Discharge" k (4), and "Furlough to the Reserve" (i).

(f) **Courts-Martial.**—All sentences of courts-martial, with dates of approval and, except in cases of summary courts, the numbers and sources of orders promulgating same.

(g) **Confinement.**—All cases of confinement with dates, and when by civil authority the nature of the offense, whether prisoners have been held for trial, tried, or discharged without trial, and, when tried, whether acquitted or convicted.

(h) **Injuries or wounds.**—All injuries or wounds received during the period covered by the roll, and whether or not contracted in line of duty. Sickness other than that resulting from injuries or wounds will not be stated.

(i) **Medal of honor and certificate of merit.**—On the first muster roll after receipt of notice of the award of a medal of honor or a certificate of merit, the fact of the award, together with the date of the engagement and the cause of the award, will be noted.

(k) **Discharge.**—Opposite the name of every soldier discharged will be noted (1) whether he was "honorably discharged," "discharged and not recommended for reenlistment," or "dishonorably discharged;" (2) date, place, and cause of discharge, and if discharged prior to expiration of term of service, the number and source of order, or description of authority therefor; (3) character given on discharge certificate, and (4) if retained in the service beyond the period for which enlisted, as indicated by the dates of enlistment and discharge, the cause for such retention will be stated. See "Soldiers Discharged and Reenlisted" par. 1 (e).

(l) **Furlough to the reserve.**—Same as for discharge except (i).

(m) **Transfer.**—Company and regiment or corps or department from or to which transferred, with date (see par. 115, A. R., 1913), and number and source of order. Except in case of transfer of privates, the grades in old and new organizations will be stated. In case of gain by transfer the remarks will also show date of joining.

(n) **Death.**—Date and place of death.

(o) **Retirement.**—Date and place of retirement, and number and source of order.

(p) **Desertion.**—Date and place of desertion. Soldiers that have deserted since last bimonthly muster will be dropped under heading of "Deserted" at the foot of the roll, even if they have been returned to military control.

(q) **Return of deserter to military control.**—Date and place of return to military control; whether deserter surrendered to or was apprehended by the military or civil authorities, and in the latter case the date of surrender or apprehension, will be noted on the first roll. On subsequent rolls, until the result of the trial has been published, or the case otherwise disposed of, will appear the remark "Awaiting trial (or result of trial) for desertion. See roll for ——, 191—." On the rolls following the final disposition of the case will appear the data given on the first roll, and also the date, with number and source of the order announcing the man's return to duty or the result of the trial, including nature of offense of which convicted. [Note.—The restoration to duty of a deserter by competent authority, namely, by the commander who would be authorized to direct that he be brought to trial, can be ordered only in case the desertion is admitted, and must not be confused with the removal (by the order of such commander or the War Department) of a charge of desertion erroneously entered on the rolls against a soldier. See pars. 131, A. R., 1913, and 43, C. of O., 1881-1915.]

(r) **Desertion and fraudulent enlistment.**—(1) Upon the apprehension or surrender of the soldier there will be noted on the first roll of the organization from which he deserted the date of apprehension or surrender, the name under which he fraudulently enlisted, and the place where confined awaiting trial; and on roll of organization in which serving fraudulent enlistment, the date of apprehension or surrender, the organization from which soldier deserted, and the name under which he served therein. (2) If convicted of desertion and fraudulent enlistment and sentenced to be dishonorably discharged, the soldier will be discharged from the organization from which he originally deserted as of name and date of enlistment under which he was serving therein, and his name dropped from the records of the organization in which fraudulently serving. (3) If not dishonorably discharged but held to serve balance of legal enlistment, the soldier will be held as of the name and date of that enlistment and his name dropped from the records of the organization in which he was serving under fraudulent enlistment. (4) If held to service as of fraudulent enlistment and ordered discharged from enlistment from which he deserted, the soldier will be discharged from the organization from which he deserted and held to service as of the date and name under which he fraudulently enlisted.

(s) **Muster by telephone.**—In cases of muster by telephone of enlisted men at subposts or on outpost or other similar duty under Section II, G. O. 49, W. D., 1917, the stations and duties of the men on the date of the muster will be stated, followed by the words "Mustered by telephone."

3. ABBREVIATIONS.

The abbreviations authorized in the preparation of the pay roll will be used on the muster roll.

4. DOTS AND "DITTO."

The use of dots and the word "ditto" is prohibited.

5. RULED COLUMNS.

The ruled columns will not be used for purposes other than as stated in these instructions or indicated in the printed headings.

6. EXTRA SHEETS.

If additional space be found absolutely necessary, the roll will be enlarged by stitching into the middle of it an extra sheet or sheets, Form No. 61-a, A. G. O., provided for that purpose. Under no circumstances will half sheets be used or pieces of paper be attached to the roll. Paper fasteners, wire, or paste will not be used in joining the sheets of the roll.

7. USE OF TYPEWRITER OR LEAD PENCIL IN THE PREPARATION OF ROLLS.

The preparation of muster rolls on a typewriting machine is authorized provided a **black record** ribbon of standard quality is used. The original copy of the roll will be forwarded to The Adjutant General's Office. Carbon copies of rolls will not be forwarded to that office. Rolls will not be prepared or signed with lead pencil of any kind.

8. CORRECTION OF ROLLS.

Corrections on muster rolls after muster and before they have been forwarded to The Adjutant General of the Army will only be made with the approval of the mustering officer. Retained rolls will not be changed until authority therefor has been obtained from The Adjutant General.

9. DISPOSITION MADE OF ROLLS.

Within three days after each bimonthly muster, the mustering officer will forward to The Adjutant General of the Army a copy of the muster roll of each company, troop, battery, or detachment. A duplicate of the muster roll will be retained. The roll for The Adjutant General's Office will be folded evenly in three folds, with the brief on the outside. It will not be folded or creased to fit an envelope, but will be mailed in an envelope of the proper size or in a wrapper made especially for the purpose.

See Appendix II—616.

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MUSTER ROLL of Detachment, Med. Dept. (Company or detachment.) U.S. Base Hospital No.26, N.A. (Regiment, corps, or department.)

Army of the United States, from last bimonthly muster on the 22th *day of* February, 191 8,

to muster on the 30th *day of* April, 1918.

NAMES, PRESENT AND ABSENT, AND RANK. (Commissioned and noncommissioned officers according to rank. Surnames of all enlisted men will precede Christian names. Privates of each class in alphabetical order.) See Instruction 1 (a).	WHEN ENLISTED.	All present and accounted except those indicated in this column by the word ABSENT.	REMARKS. (In cases of detachments composed of more than one company, the company to which each man belongs will be shown under "Remarks.")
CAPTAIN SAN.CORPS N.A.			
Richard C. Foe			Commanding Detachment
HOSPITAL SERGEANT			
Yargey, George B.	Dec.30/13		804,664 Aptd Hosp.Sgt.fr Sgt 1cl Apr. 1/18 per wrnt SGO,WD, same date.
SERGEANT 1ST CLASS			
Mannix, Daniel F.	May 14/16	Absent	804,665 On furlo for 3 mos since Mar 15/18, par 106 A.R.
Driscoll, Theodore G.	Jun 9/17		804,668 Aptd Sgt.1cl fr Sgt.Apr.2/18 per wrnt SGO,WD same date.
SERGEANT			
Anderson, Kingate M.	Jun 5/17	Absent	804,700 On DS since Mar 24/18 conducting an insane patient to Washington D.C. par 2 SO 123 SEDept Mar.20/18.
COOK			
Byers, George E.	Jun 12/17		804,686
PRIVATES 1ST CLASS			
Borgeson, Egbert J.	Jun 4/17		804,693 Jd for duty Mar 6/18 fr U.S.A. Genl.Hosp.No.6, Ft.McPherson,Ga. par 1 SO 120 SEDept Mar.2/18.
Bregal, Fred L.	Dec.13/17		804,694 To forfeit 5 days pay SC Apr. 5/18.
Elliott, Harvey	Nov.4/17		804,699 To be conf at hard labor for 10 days and to forfeit 10 days pay SC Mar.20/18. In conf fr Mar 20 to 30/18.
PRIVATES			
Anderson, Howard	Jun 19/17	Absent	804,800 AWOL since Apr.26/18.
Arthur, Lloyd T.	Jun 13/17		804,713

Additional sheets (Form 61-a), if required, will be fastened with thread along the fold. See Instruction 6.

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NAMES, PRESENT AND ABSENT, AND RANK. (Commissioned and noncommissioned officers according to rank. Surnames of all enlisted men will precede Christain names. Privates of each class in alphabetical order.) See instruction 1 (a).	WHEN ENLISTED.	All present and mustered except those indicated in this column by the word ABSENT.	REMARKS. (In cases of detachments composed of more than one company, the company to which each man belongs will be shown under "Remarks.")
DISCHARGED			
PRIVATE			
Jones, Walter L.	Apr.2/14		891,924 Hon disch at this post Apr.1/18 upon completion of 4 yrs active serv. for purpose of reenl for 7 yrs. Character Good. No AWOL or absence fr duty under G045/14.
RETIRED			
SERGEANT			
Finklestein, Isidore	Jan 12/16		890,254 Retired Mar.13/18 par 12 SO 124 WD Mar.1/18.
DESERTED			
Butte, Harry I.	Oct.15/17		890734 Deserted at Ft.McPherson,Ga.Mar. 13/18.

I certify that this muster roll is made out in the manner required by the printed instructions; that the remarks set opposite the name of each officer and soldier are accurate and just; and that it exhibits the true state of the organization for the period mentioned herein, as required by Regulations and the Rules and Articles of War.

Captain San.Corps,N.A.
Commanding the Organization.

STATION: Ft.McPherson, Ga.

I certify that I have mustered the organization this 30th day of April, 1918, and that I have carefully examined this muster roll. (See note.)

Colonel, Medical Corps.
Mustering Officer.

NOTE.—It is made the special duty of the Mustering Officer to see that the roll is signed by the proper officer; that the absentees are indicated in the column provided for that purpose, and that the roll in the main is correct.

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FORM 47a.
MEDICAL DEPARTMENT, U. S. A.
(Revised July 14, 1916)

RETURN OF THE ENLISTED FORCE OF THE MEDICAL DEPARTMENT

OF

Base Hospital Number 26
(Designation of sanitary formation.)

Ft. Mc Pherson, Atlanta, Ga.

FOR THE MONTH ENDING

April 30th, 1918

Signature:

Richard C. Roe

Captain San. Corps, N.A., *U. S. A.*,
Commanding Formation.

DATE WHEN MAILED:

May 5th, 1918

☞ Enter record marks and numbers below this line.

INSTRUCTIONS

1. The immediate commanding officer of every sanitary formation in the field will make a *monthly* return thereof on this form; and will forward it through medical channels to the Surgeon General within five days after the end of the month covered by it. He will make a *final* return thereof upon the breaking up of the formation and forward it through the same channels within five days thereafter.

(*a*) The division surgeon, surgeon base group, or department surgeon, as the case may be, will promptly examine the return, will have the responsible officer correct any errors found therein, will take such memoranda therefrom as he may require, and will without delay transmit it by informal indorsement (*e. g.*, dating stamp) to the Surgeon General.

2. The return first executed hereon after the formation takes the field will, in addition to the numerical statement, give under *Remarks* the names arranged according to rank of all soldiers of the Medical Department belonging to or present with the formation during the period of the return, will indicate where they came from and date of joining, and will show which of them remain with the command at the end of the period of the return, and the disposition, with date, of the others.

(*a*) After the first return until the final return gains and losses only will be reported by name, giving in each instance the soldier's rank, the character of the gain or loss, and its date. They will be arranged in the order of the entries in the numerical table.

(*b*) The final return will name according to their rank all the soldiers belonging to the formation since the date of the preceding return, including those gained and lost (giving the character of the gain or loss with its date, in each instance), and showing the distribution of the men upon the breaking up of the formation so far as known.

(*c*) Orders of assignment or transfer need not be cited. The character given on furlough to the reserve or discharge will be noted; also the soldier's physical condition, good or bad.

3. All entries should be plainly written. If one line is insufficient, a second should be used. Interlineations should be avoided. Additional sheets of the same size as the form should be inserted if necessary.

4. Record will be made under *Remarks* on the next return after an engagement or campaign of the part if any had therein by the formation, or its individual members, naming them; also of commendations of the formation as a whole or of individual members thereof. This record should follow the record of gains and losses. 8—3430

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RETURN OF THE ENLISTED FORCE OF THE MEDICAL DEPARTMENT

of Base Hospital No.26, Med. Dept., National Army, Ft. McPherson, Atlanta, Ga.

(Here insert designation of military formation, and the division to which attached; also the name of camp and nearest town at date of making the return.)

for the month ending April 30th, 1918

GRADES	Aggregate last return	GAINS							LOSSES													Total present and absent last date of this return
		Enlisted	Reenlisted	Transferred from the line	Rejoined from desertion	Other gains to Medical Department	Transferred from other sanitary formation	Total gains to formation	Furloughed to the reserve	Discharged: By order	Discharged: By sentence G. C. M.	Discharged: For disability	Discharged: For reenlistment	Retired	Transferred to the line	Deserted	Died: Killed in action	Died: Of wounds	Died: Of disease	Other losses to Medical Department	Transferred to other sanitary formations	Total losses to formation	
Master hospital sergeants																						
Hospital sergeants	3																					3
Sergeants first class	10																					10
Sergeants	9																					9
Corporals																						
Lance corporals																						
Cooks	8																					8
Horseshoers																						
Saddlers																						
Farriers																						
Mechanics																						
Privates first class	20																					20
Privates	102	1					1					1										103

REMARKS

GAINS

BY ENLISTMENT

PRIVATES:

Buck, Junior C. — 804,818 Enl Apr 3/18 at Ft.McPherson, Ga. per tel.auth. SG Apr.2/18.

BY TRANSFER

PRIVATES:

Ball, Benjamin C. — 1,140,460 Trans as Pvt fr Unit "V" Med Dept NA Apr 1/18

LOSSES

DISCHARGED

PRIVATES:

Haviland, Severn T. — 804,445 Disch Apr.5/18 on CDD per 4th Ind SGDept Apr.2/18. Character: Excellent. Physical Condition: Bad.

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NOTE 1.—On the first day of each month every officer commanding a company, troop, or battery will send a copy of this return to regimental headquarters (in case of Coast Artillery to coast defense headquarters, and in case of Engineer companies to battalion headquarters), and every officer commanding a company, troop, or battery not forming a part of a regiment, battalion, or squadron will send a copy to The Adjutant General of the Army. The return will be made out in duplicate and one copy retained. The retained copy will, if necessary, be loaned to post headquarters for the preparation of the post return. The making of carbon copies is authorized, but they must be clear and distinct and the original copy must be the one forwarded.

Base Hospital No. 26, Medical Department, N.A., *stationed at* Fort McPherson, Georgia
(Organization.) (Regiment.)

CONDITION OF THE ORGANIZATION AT MIDNIGHT ON THE LAST DAY OF April, 1918:

OFFICERS.				ENLISTED MEN.					STRENGTH LAST MONTHLY RETURN.				HORSES.			
	ABSENT.				ABSENT.											
PRESENT.	Within the Department.	Without the Department.	Total.	PRESENT.	Within the Dept. On detached service.	Within the Dept. For other causes.	Without the Department.	TOTAL.	Officers.	Enlisted men.	Wounded in action.	Missing in action.	Serviceable.	Unserviceable.	Lost in action, died, etc.	PIECES OF ARTILLERY.
3		1	4	202			1	203	4	152						
*1			1						1							

*Officers and enlisted men attached will be reported on this line, but will not be included in any of the totals.

Number of men to be discharged during the next three months, none; *number who will probably reenlist,* .....

EFFECTIVE STRENGTH: Officers, ...; *enlisted men,* .....

(Effective strength will be reported only in campaign, and in determining such strength only those who are available for service in line of battle will be included. Officers or enlisted men who are sick or disabled, on duty in any of the staff or supply departments, or for any other reason are not available in line of battle, will be excluded.)

ALTERATIONS SINCE LAST MONTHLY RETURN.

OFFICERS.							ENLISTED MEN.																		
GAIN.	LOSS.						GAIN.						LOSS.												
				DIED.									DISCHARGED.					DIED.							
By promotion, appointment, or transfer.	Resigned.	Dismissed.	Transferred or retired.	Killed in action.	Of wounds received in action.	Of disease, etc.	Enlisted.	Reenlisted.	Recruits from depot.	By transfer.	From desertion.	Total.	Expiration of service.	For disability.	By sentence G. C. M.	By order.	Retired.	Transferred.	Killed in action.	Wounds rec'd in action.	Of disease.	Accident.	Drowned.	Suicide.	Murder or homicide.	Deserted.	Total.
1			1				3			50		53		2												2

John C. Adams

Colonel, Med.Corps.

Commanding Organization.

FORM NO. 80—A. G. O.
Ed. May 28-17—1,000,000.

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RETURN OF

Base Hospital No.26, Med.Dept.,N.A.
(Organization.) (Regiment.)

April
(Month.)

, 191 8.

OFFICERS, PRESENT AND ABSENT, ACCOUNTED FOR BY NAME.

NOTE 2.—Officers will be accounted for by name under the following headings and in the order named: 1, *Present*; 2, *Absent*; 3, *Resigned, died, or transferred*; 4, *Attached*.

NOTE 3.—The *date* (with number, date, and source of order) on which an officer is *assigned, attached, transferred to, or relieved from duty with, joins or rejoins*, the organization, *assumes* or is *relieved* from the command of it, or from any *special* duty, also all absences of whatever duration or from whatever cause, with authority therefor, and dates of departure and return will be stated opposite his name.

NOTE 4.—All cases of absence, the nature, commencement of, and termination, and periods authorized, with numbers, dates, and sources of orders (and in case of absence on detached service, sick, or in confinement, the place of absence) will be stated on the first return; on subsequent returns, while such absences continue, will be noted, "_____, since _____ See return _____ (recall) _____, 191 ."
(Nature of absence.) (Month, date, and year.) (First return bearing the entry.)

NOTE 5.—Opposite the names of officers who have *resigned* or been *transferred* from the organization will be noted the date of resignation or transfer, with number, date, and source of order, and opposite the names of those who have died, the date, place, and cause of death.

NAME.	RANK.	REMARKS.
PRESENT		
John C. Adams	Col.MC	Comdg. Base Hospital No. 26
James A. Arthur	Maj.MC	
Henry H. Fox	Capt. M.R.C.	Joined Apr.1/18 at Ft.McPherson,Ga., from Hosp. Unit "V" per tel.instr. S.G.O., Mch.30/18.
ABSENT		
George P. Smith	1st.Lt. M.R.C.	On seven days leave of absence since Apr.28/18 per Par. 1 SO 132 S.E.Dept., Apr.28/18.
TRANSFERRED		
John Doe	1st.Lt M.R.C.	Transferred to Base Hosp.No.13, Ft.McPherson,Ga. Apr.6/18 per Par.11 SO 198 W.D.,A.G.O.,Apr.3/18.
ATTACHED		
William P. Jones		Attached to Base Hosp.No.26 as civilian chaplain per auth. contained in letter WD.,SGO.,Dec.15/17.

RECORD OF EVENTS.

NOTE 6.—*Actions* in which the organization, or any portion of it, has been engaged, *scouts, marches, maneuvers, changes of stations*, and *everything of interest* relating to the *discipline, efficiency*, or *service* of the organization, will be *minutely* and carefully noted, with *dates, places, distances marched*, etc.

NOTE 7.—The name and rank of officers and soldiers *killed, missing, or wounded* in action, with *dates* and *places*, will be accurately noted.

During the month this organization has engaged in the routine training of a Base Hospital at Fort McPherson, Ga.

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See Par. 45-46-47
M. M. A.

BASE HOSPITAL NO. 1
FORT SAM HOUSTON, TEXAS.
June 18, 1917.

From: Surgeon.

To: Surgeon General of the Army.
(Thru Dept. Surgeon S Dept.)

Subject: Personnel Medical Department.

1. Report the following change of status Medical Department:

Private Harry Jones joined for duty this date, by transfer from Troop "I", 3rd Cavalry, Fort Sam Houston, Texas, par 3, SO 116, S Dept., June 16, 1917.

Private 1st class William H. Brown left post this date, enroute to Fort Bliss, Texas, for duty with Base Hospital No 2, par 6, SO 116, S Dept., June 16, 1917.

Private Carl F. Dolan sick in hospital since June 8, 1917.

Private Henry S. Miller AWOL since June 8/17.

Private Clarence T. Mills to forfeit 10 days pay SC June 15/17.

R.F.Metcalf
Major, Medical Corps.

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See Par 106-113 A.R.

FURLOUGH.

TO ALL WHOM IT MAY CONCERN:

Be it known, That in pursuance of authority in me vested by par 106, Army Regulations

(Give full reference to orders or other authority.)

a **FURLOUGH** is hereby granted to

Thomas F. Prendergast

a Cpl. of Medical, ~~Regiment of~~

Department for the period from

July 1, 1917, to Sept. 30, 1917,

both days inclusive, with permission to go to

Chicago, Illinois *

~~or for [illegible] days from date of arrival in the United States~~ The close of the last day of this furlough must find him with his Detachment

~~at [illegible]~~*

~~or~~ at Fort Sam Houston, Texas.

(Here enter name of post nearest home port of embarkation.)

Station: Fort Sam Houston, Texas.

Date: July 1, 1917.

Millard F. Waltz

Colonel, 19th Infantry

Commanding Post.

*The changes in the form above indicated will be made on furloughs granted soldiers serving in Porto Rico, Hawaii, Guam, Philippine Islands, Alaska, or at any station beyond the limits of the United States. (A. R. 111.)

Form No. 66, A. G. O.
Ed. May 11-16—35,000. 3—1231

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Memorandum: This soldier was last paid to include June 30, 1917; included on ration-return to June 30, 1917; actually rationed to include June 30, 1917, [illegible]

[illegible]

[illegible]

[illegible]

Wm H. Smith

Captain, Medical Corps.

Commanding [illegible] det., Med [illegible] Dept.

CERTIFICATE OF TRANSPORT QUARTERMASTER, OR CAPTAIN OR PURSER OF COMMERCIAL LINER.

I certify that subsistence was furnished the above-named man from ....., 191 ,

to ....., 191 (both dates inclusive),

on .....

which arrived at .....

on ....., 191 .....

.....

.....

.....

DESCRIPTION OF SOLDIER.

Age, 24; height, 5 feet 6 inches;

complexion, fair; eyes, blue;

hair, dk. brown

Signature of soldier: Thomas F. Prendergast

3—1221

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Base Hospital No. 1
Fort Sam Houston, Tex.

Sept. 30th, 191 7.

The above-named soldier reported for duty, as required by this furlough, on the 30th day of Sept., 1917, or was discharged per Special Orders, No. ....., Hdqrs. ....., 191 , on the ..... day of ....., 191 , and will be included on ration-return from and including *....., 191

The rations reported as overdrawn were duly deducted from the ration-return referred to.

Wm. H. Smith
Capt. Med. Corps
Commanding Detach. Med. Dept.

Commutation of rations paid by Check No....., on .....
in favor of ....., or order, dated ....., 191 . Am't, $.....

.....
....., *Quartermaster.*

*Enlisted men joining station at or before dinner hour of a given day will be allowed full rations for the day. A fraction of a ration less than one-half is disregarded, and a fraction more than one-half is considered a ration. (Par. 186, Man. Subs. Dept., 1910.)

3—1231

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Subvoucher No. ----------

TO

Voucher No. ----------, Abstract of Disbursements,

PERTAINING TO ACCOUNT CURRENT

of ----------

----------, Quartermaster, for

----------, 191

INSTRUCTIONS.

Failure to rejoin proper station on the expiration of the furlough works a forfeiture of any claim for commutation of rations for the period of the furlough.

This paper will be preserved by the soldier for use in collecting commutation of rations, which will be paid by any quartermaster having funds for the purpose, after the certificate on page 3 hereof has been duly executed.

The transport quartermaster will certify hereon the dates between which subsistence was furnished on the transport, and the date the vessel arrived in the United States.

The commanding officer of the post at which the soldier is directed to report on the expiration of his furlough will cause the certificate on page 3 hereof to be executed, showing date the soldier reported.

The authority under which a furlough is granted (whether under Army Regulations or in pursuance of the orders of a superior) should be cited on the face of the furlough by the officer granting it. If the *period* for which the furlough is given is within the competency of the authority cited, no copy of the order is needed to accompany the furlough when presented to a disbursing officer for payment of commutation of rations; but if the *period* is manifestly beyond the competency of the authority cited, the furlough should, when presented for payment of commutations of rations, be accompanied by copies of all orders in pursuance of which it was given.

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Pleas:

Findings:

Sentence, _____

Days in arrest (or confinement), _____; **Maximum punishment,** _____

Remarks:

[NOTE.—The above spaces are intended only for use for record purposes at the headquarters of the officer appointing the special or general court-martial, and it is not intended that they shall be filled in by summary courts, trial judge advocates, etc.]

INSTRUCTIONS.

1. Submission of charges.—All charges for trial by court-martial will be prepared in triplicate, using the prescribed charge sheet as a first sheet and using such additional sheets of ordinary paper as are required. They will be accompanied—

(*a*) Except when trial is to be had by summary court, by a brief statement of the substance of all material testimony expected from each material witness, both those for the prosecution and those for the defense, together with all available and necessary information as to any other actual or probable testimony or evidence in the case; and

(*b*) In the case of a soldier, by properly authenticated evidence of convictions, if any, of an offense or offenses committed by him during his current enlistment and within one year next preceding the date of the alleged commission by him of any offenses set forth in the charges.

They will be forwarded by the officer preferring them to the officer immediately exercising summary court-martial jurisdiction over the command to which the accused belongs, and will by him and by each superior commander into whose hands they may come either be referred to a court-martial within his jurisdiction for trial, forwarded to the next superior authority exercising court-martial jurisdiction over the command to which the accused belongs or pertains, or otherwise disposed of as circumstances may appear to require. (M. C. M., par. 75.)

2. Investigation of charges.—If the officer immediately exercising summary court-martial jurisdiction over the command to which the accused belongs or pertains decides to forward the charges to superior authority, he will, before so doing, either carefully investigate them himself or will cause an officer other than the officer preferring the charges to investigate them carefully and to report to him, orally or otherwise, the result of such investigation. The officer investigating the charges will afford to the accused an opportunity to make any statement, offer any evidence, or present any matter in extenuation that he may desire to have considered in connection with the accusations against him. If the accused desires to submit nothing, the indorsement will so state. In his indorsement forwarding the charges to superior authority the commanding officer will include:

(*a*) The name of the officer who investigated the charges;

(*b*) The opinion of both such officer and himself as to whether the several charges can be sustained;

(*c*) The substance of such material statement, if any, as the accused may have voluntarily made in connection with the case during the investigation thereof;

(*d*) A summary of the extenuating circumstances, if any, connected with the case;

(*e*) His recommendation of action to be taken. (M. C. M., par. 76.)

3. Disposition of copies of charges.—(*a*) When trial is to be had by summary court the charges will be completed as the record of trial, a copy thereof will be completed as a copy of the summary court record for the company or other commander, and the other copy will, with the least practicable delay after action has been taken on the sentence, be completed and transmitted as the required report of trial to the officer exercising general court-martial jurisdiction over the command, there to be filed in the office of the judge advocate for a period of two years, at the end of which time it may be destroyed;

(*b*) When trial is to be had by special or general court-martial the charges and one copy thereof will be referred to the trial judge advocate, the copy to be furnished by him to the accused or his counsel, and the other copy will be used for record purposes in the office of the officer appointing the trial court, the top fold of this copy of the charge sheet, in case of trial by general court-martial, being detached at the proper time and forwarded with the record of trial to the Judge Advocate General of the Army. (M. C. M., par. 79.)

4. Disposition of evidence of previous convictions.—(*a*) The evidence of a previous conviction referred to a summary court or to the judge advocate of a special court will, after trial, be returned by him to the appointing authority and will, after action by the latter on the case, be returned to the company or detachment to which it pertains;

(*b*) The evidence of a previous conviction referred to the judge advocate of a general court-martial will, if a company record, after trial be returned by him direct to the company or detachment to which it pertains, and a certified copy thereof will be attached to the record of trial. (M. C. M., par. 306.)

[NOTE.—This form supersedes the blank form for record of trial by summary court (Form No. 99, A. G. O.), the blank form for report of trial by summary court (Form No. 59, A. G. O.), and the blank form for statement of service (Form No. 15, A. G. O.).]

Google

Court martial manual

CHARGE SHEET. Number _____ (In summary court record.)

Fort Sam Houston, Texas, June 10, 1917.
(Place.) (Date.)

Johnson, George A., Private Company 'A', 19th Infantry.
(Surname.) (Christian name.) (Rank and organization.)

Date current enlistment, Jan. 1, 1917; Rate of pay, $ 30.00; No. previous convictions, 0

Previous service, None.
(Give dates, with character given on each discharge.)

Date of—Arrest, X X X X X X X X 19____ Place where accused is now in arrest (or confinement),

Confinement, X X X X X, 19____ Sick in Base Hosp. #1, Ft. Sam Houston, Tex.

Witnesses:

1st Lieut. P. N. Bowman, MRC.; _____; _____; _____;

_____; _____; _____; _____; _____; _____.

Charge : Violation of the 96th Article of War.

Specification : In that Private George A. Johnson, Company 'A', 19th Infantry, having been directed to report for prophylactic treatment at Base Hospital No. 1 did, at Fort Sam Houston, Texas, on or about the 1st day of June, 1917, fail to report as directed.

Wm. H. Smith

Captain, Medical Corps.

1st Ind.

Hdq. Fort Sam Houston, Texas, June 11, 1917.- To Major Raymond F. Metcalfe, Med. Corps Trial Officer, Summary Court.

1. For trial.

By order of Colonel Waltz.

W. A. Cavenaugh
Captain & Adjutant 19th Infantry,
Adjutant.

Findings: Guilty.

Sentence: To forfeit seven (7) days pay.

R. F. Metcalfe
Major, Medical Corps,
Summary Court.

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See Cl- Martial Manual

CHARGE SHEET. Number ..... (In summary court record.)

Fort Sam Houston, Texas (Place.), June 6, (Date.), 1917.

Jones, (Surname.) John (Christian name.), Private Medical Department. (Rank and organization.)

Date current enlistment, June 25th, 1916; Rate of pay, $30.00 No. previous convictions, 3

Previous service, None. (Give dates, with character given on each discharge.)

Date of—Arrest, x x x x x x x x, 19..... Place where accused is now in arrest (or confinement),

Confinement, June 5th, 1917 Post Guard House.

Witnesses:

Captain Joseph Street, M.C.; Sgt. 1/c John Williams, MD.;

Captain John Dear, 57th Inf.; Pvt. John Doe, Co. 'A', 57th Inf.

Charge I: Violation of the 61st Article of War.

Specification I: In that Private John Jones, Medical Department did, at Fort Sam Houston Texas, without proper leave, absent himself from his detachment from about May 25th 1917 until about 7:30 P.M., June 5th, 1917.

Charge II : Violation of the 96th Article of War.

Specification I : In that Private John Jones, Medical Department was, at San Antonio, Texas, on or about the 5th day of June, 1917, drunk and disorderly in uniform, and did thereby bring discredit upon the military service.

Joseph Street
Captain, Medical Corps.

1st Ind.

Hdq. Fort Sam Houston, Texas, June 9, 1917. - To The Judge Advocate Special Court Martial, Fort Sam Houston, Texas.

1. For trial.

John R. Budell
Colonel, 18th Infantry,
Commanding.

Form No. 504, A. G. O.
Ed. Mar. 15-17—100,000.

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SUMMARY OF EVIDENCE
EXPECTED FROM WITNESSES.

****

****

U.S.

vs

McCormick,Leighton,
Private,Battery "B",
7th Field Artillery.

****

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See C.M. Manual Manual.

SUMMARY OF EVIDENCE
expected from witnesses
in the case of

US

vs

Private John Jones,Medical Department.

Captain Joseph Street,Medical Corps will testify that on or about the 25th day of May,1917 the accused was reported to him as absent without leave and that he was not to be found in quarters from about May 25th 1917 until returned by the Provost Marshall about 7:30 P.M.,June 5th 1917.

Provost Marshall,Captain,John Dear,57th Infantry will testify that at or about 3:00 P.M.,June 5th 1917 the accused was turned over to him at the city jail San Antonio,Texas charged with being drunk and disorderly on the streets of that city,and that the accused was drunk at the time and in a filthy ragged condition.

Sergeant 1st Class John Williams,Medical Department will testify that the accused was absent from revielle roll-call May 25th 1917 until returned by Provost Marshall about 7:30 P.M.,June 5th 1917,and that at no time during this period was the accused present.

Private John Doe,Company 'A',57th Infantry will testify that at or about 2:00 P.M.,June 5th 1917 while on duty as provost guard in the city of San Antonio,Texas he noticed a crowd gathered in front of the Harum Theater and that he went to find out the cause of the throng; that when he had made his way to the center of this crowd he found that a soldier,the accused,in a filthy condition was down on the side walk and could not get up,that the accused was drunk at the time and that he was using very profane language in a tone of voice loud enough for the people gathered around to here.

Joseph Street.

Captain,Medical Corps.

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Cons-Martial Manual.

CHARGE SHEET. Number _____ (In summary court record.)

Fort Sam Houston, Texas, June 11, 1917
(Place.) (Date.)

McCormick, Leighton, Private Battery "B", 7th Field Artillery.
(Surname.) (Christian name.) (Rank and organization.)

Date current enlistment, January 1st, 1917; Rate of pay, $30.00; No. previous convictions, 1

Previous service, 3 years, Battery "A", 3rd Field Artillery, "Excellent".
(Give dates, with character given on each discharge.)

Date of—Arrest, x x x x x x x, 19__ Place where accused is now in arrest (or confinement),

Confinement, June 10, 1917 7th F.A. Guard House, Camp Wilson, Texas.

Witnesses:

1st Lieut. R.L. Cook, MORC., _____; _____, _____,

Sgt. 1st Class H.C. Bander, Med. Dept., Pvt. 1st Class D.J. Jones, Med. Dept.

Charge : Violation of the 96th Article of War.

Specification : In that Private Leighton McCormick, Battery "B", 7th Field Artillery, while suffering with secondary syphilis, did, at Base Hospital No. 1, Fort Sam Houston, Texas, on or about the 10th day of June, 1917, refuse to submit to the surgical operation prescribed by 1st Lieut. R.L. Cook, MORC., the said operation consisting in the administration of Salvarsan, being necessary and being without appreciable risk to his life.

John D. Corn.
Captain Medical Corps.

1st Ind.

Hq. Fort Sam Houston, Texas, June 14, 1917:- To the Commanding General, Southern Department, Fort Sam Houston, Texas.

Forwarded.

J.J. Stone.
Colonel, 112th Infantry.

Office of the Commanding General, Southern Department, Fort Sam Houston, Texas, June 15, 1917:- To the Judge Advocate General Court Martial, Fort Sam Houston, Texas.

1. For trial.

By order of Brigadier General Parker :

John Smith.

Colonel, Adjutant General,
Department Adjutant.

Form No. 394, A. G. O.
Ed. Mar. 11-17—300,000.

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See Ch: Medical Manual

Base Hospital No.1,
Fort Sam Houston,Texas,
June 11,1917.

I certify that the operation,(administration of Salvarsan), prescribed by me for Private Leighton McCormick,Battery "B",7th Field Artillery is without appreciable risk to his life.

R.L.Cook

1st Lieutenant,
Medical Officers Reserve Corps.

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See Court martial Manual

SUMMARY OF EVIDENCE
expected from witnesses
in the case of

US.

vs.

McCormick,Leighton,Private Battery 'B',7th Field Artillery.

First Lieutenant Richard L. Cook,Medical Officer's Reserve Corps will testify that on or about the 10th day of June,1917,the accused reported to Base Hospital No.1,Fort Sam Houston,Texas for the administration of Salvarsan,and that when ordered to prepare himself for the operation,the accused refused,saying," I am not going to take any of that stuff," or words to that effect.

Sergeant 1st Class Harry C.Bauder,Medical Department will testify that on or about the 10th day of June,1917,the accused reported to Base Hospital No.1,Fort Sam Houston,Texas for the administration of Salvarsan but when ordered to prepare himself for the operation,the accused refused, saying,"I am not going to take any of that stuff",or words to that effect, and that Lieut.Cook then explained to the accused that he,(Lt.Cook),was not giving the accused treatment for pleasure,but for his own good,and that he ought to take the Salvarsan without any trouble,but the accused still refused.

Private 1st Class Dolpha J. Jones,Medical Department will testify that the accused reported to Base Hospital No.1,Fort Sam Houston,Texas, on or about the 10th day of June,1917 for the administration of a dose of Salvarsan,but when ordered to prepare himself for the operation he refused, saying,"I am not going to take any of that stuff", or words to that effect.

A.A.Smith

Captain,Medical Corps.

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Par 134-13-8 A.R.

Honorable Discharge from the United States Army.

TO ALL WHOM IT MAY CONCERN:

This is to Certify, That William E. Jackson

a Private of Company "K" of the Second Regiment

of Infantry, as a TESTIMONIAL OF HONEST AND FAITHFUL SERVICE,

is hereby HONORABLY DISCHARGED from the UNITED STATES ARMY by reason

of completion of 4 years active service for purpose of reenlisting for another 7 years.

Said William E. Jackson was born

in Milwaukee, in the State of Wisconsin, and when

enlisted was 23 4/12 years of age, by occupation a machinist,

had blue eyes, brown hair, ruddy complexion, and was

5 feet 8 inches in height.

Given under my hand at Camp Wilson, Texas this

14th day of June, one thousand nine hundred and seventeen.

Thomas Brown

Lieut. Col., 2nd Infantry

Commanding. Regt.

8—2104

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ENLISTMENT RECORD.

Name: William E. Jackson *Grade:* Private

Enlisted May 3, 1915, *at* Columbus Bks., Ohio, *for* 7 *years.*

Serving in First *enlistment period at date of discharge.*

Previous service: None

Noncommissioned officer: Never

Marksmanship: Ss June 3, 1915, RSO, 64, Aug 3/16.

Horsemanship: No practice

Battles, engagements, skirmishes, expeditions: None.

Knowledge of any vocation: Not known

Wounds received in service: None

Physical condition when discharged: Good

Typhoid prophylaxis completed June 3/15.

Married or single: Single

Character: Excellent.

Remarks: No AWOL, or absence from duty under GO 45, WD, 1914.

Signature of soldier: William E. Jackson

Is -- *recommended for reenlistment.*

William Jones

Captain, 2nd Infantry

Commanding Co. "K"

Form No. 525, A. G. O.
Ed. Aug. 16-10—100,000.

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Par. 139-15-8 A. R.

DISCHARGE FROM THE UNITED STATES ARMY.

TO ALL WHOM IT MAY CONCERN.

This is to Certify, That William E. Jackson

a Private of Company "K" of the Second Regiment

of Infantry is hereby

Discharged from the United States Army by reason of habits and

traits of character which render him unsuitable for military service, par 148½,
(State fully the actual cause of discharge.)

A.R., - par 9, SO 168, S Dept., June 10, 1917.

Said William E. Jackson was born

in Milwaukee, in the State of Wisconsin, and when

enlisted was 23 4/12 years of age, by occupation a machinist,

had blue eyes, brown hair, ruddy complexion, and was

5 feet 8 inches in height.

Given under my hand at Camp Wilson, Texas this

14th day of June, one thousand nine hundred and seventeen.

Thomas Brown

Lieut. Col., 2nd Infantry

Commanding. Regt.

2—316

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ENLISTMENT RECORD.

Name: William E. Jackson. *Grade:* Private

Enlisted May 3, 1915, *at* Columbus Bks., Ohio, *for* 7 *years.*

Serving in First *enlistment period at date of discharge.*

Previous service: None

Noncommissioned officer: Never

Marksmanship: Mm June 3, 1916, RSO, 64, Aug 3/16

Horsemanship: No practice

Battles, engagements, skirmishes, expeditions: None

Knowledge of any vocation: Not known

Wounds received in service: None

Physical condition when discharged: Good

Typhoid prophylaxis completed June 3, 1915

Married or single: Single

Character: Fair

Remarks: AWOL Oct 3 - 10/16; May 18 - 21/17.

Signature of soldier: William E. Jackson

I not *recommended for reenlistment.*

William Jones

Captain, 2nd Infantry

Commanding Co. "K"

Form No. 526, A. G. O.
Ed. Aug. 23-16—50,000.

3—2163

Digitized by Google

See Par 139 - 158 A.R.

Dishonorable Discharge from the United States Army.

To all whom it may concern:

This is to Certify, That William E. Jackson

a Private of Company "K" of the 2cond Regiment

of Infantry is hereby

Dishonorably Discharged from the United States Army by reason of the sentence of

a General Court-Martial Order No 234, Hq. Southern Department, June 2, 1917.

Said William E. Jackson was born

in Milwaukee, in the State of Wisconsin, and when

enlisted was 23 4/12 years of age, by occupation a machinist,

had blue eyes, brown hair, ruddy complexion, and

was 5 feet 8 inches in height.

Given under my hand at Camp Wilson, Texas this 14th

day of June, one thousand nine hundred

and seventeen

Thomas Brown

Lieut. Col., 2nd Infantry

Commanding. Regt.

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ENLISTMENT RECORD.

Name: William E. Jackson *Grade:* Private

Enlisted May 3, 1915 *at* Columbus Bks., Ohio *for* 7 *years.*

Serving in First *enlistment period at date of discharge.*

Previous service: None

Noncommissioned officer: Never

Marksmanship: Mm June 3, 1916, RSO, 64, Aug 3/16

Horsemanship: No practice

Battles, engagements, skirmishes, expeditions: None

Knowledge of any vocation: Not known

Wounds received in service: None

Physical condition when discharged: Good

Typhoid prophylaxis completed June 3, 1915

Married or single: Single

Character: Fair

Remarks: AWOL Oct 3 - 10/16; May 18 - 21/17.

Signature of soldier: William E. Jackson

I not *recommended for reenlistment.*

William Jonas

Captain, 2nd Infantry

Commanding Co. "K"

FORM No. 525, A. G. O.
Ed. Aug. 23-16—10,000.

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See pa. 134 A.R.

Base Hospital No.1

Fort Sam Houston,Texas.

June 24, 1917.

From: John Brown,Sergeant,Medical Department.

To: The Adjutant General of the Army.*

Subject: Retirement of Sergeant John Brown,Medical Department.

I request to be placed upon the retired list. My service is as follows:

ENLISTMENTS.				Yrs.	Mos.	Days.	No. of Days A. Wo. L.
No.	Organization.	From—	To—				
1	Co.'L'20th Inf.	June 11,1896	June 10,1899	3			
2	Co.'B'2nd Inf.	June 11,1899	June 10,1902	3			
3	Co.'C' 10th Inf.	June 11,1902	June 10,1905	3			
4	Hosp.Corps	June 11,1905	June 10,1908	3			
5	Hospital Corps	June 11,1908	June 10,1911	3			
6	Hospital Corps	June 11,1911	June 10,1914	3			
7	Hosp.Corps & Med.Dept.	June 11,1914	Present time	3		14	
8							
9							
10							
11							
12							
	Total			21		14.	

DOUBLE TIME FOR FOREIGN SERVICE (A. R. 134).						Furloughs while on Foreign Service.	
Place.	From—	To—	Yrs.	Mos.	Days.	Mos.	Days.
Cuba	June 1,1898	Aug.22,1902	4	2	21	2	15
Phil.Islands	Sept.15,1904	Nov.10,1909	5	1	25	2	
Total			9	4	16	4	15

I am serving in the 7th enlistment period and desire to be retired at Fort Sam Houston,Texas.

John Brown
(Signature.)

Sergeant, Medical Department.
(Rank and organization.)

*To be forwarded by post commander direct (A. R. 134)

Form No. 468.—A. G. O.
Ed. Mar. 31-14-5,000.

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See par 134 A.R.

1st Ind.

Base Hospital No.1,Fort Sam Houston,Texas,June 25,1917. - To The Commanding Officer Fort Sam Houston,Texas.

1. Forwarded.

W.A.Johnson
Major,Medical Corps
Commanding.

2nd Ind.

Hdqrs.Fort Sam Houston,Texas,June 27,1917. - To The Adjutant General, U.S.Army,Washington,D.C.

1. Forwarded.

W.A.Smith
Colonel 9th Infantry,
Commanding.

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Form 66
MEDICAL DEPARTMENT, U. S. A.
(Authorized July 23, 1915)

ARMY NURSE CORPS

RECORD OF ASSIGNMENT AND PAY

OF

Miss Mary E. Doe, nurse, A.N.C.

at Base Hospital No. 1, Ft. Sam Houston, Texas.

from June 7, 1917, *191*

to July 20, 1917, *191*

9—2462

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Par 78 W. D.

RECORD OF ASSIGNMENT AND PAY OF ARMY NURSE

NAME OF NURSE	NAME, KINSHIP, AND ADDRESS OF NEAREST RELATIVE
Doe, Mary E. (Surname.) (Given name.)	C/O Father, Mr. John E. Doe, 1145 West 13th St., New York City.

Service in Army Nurse Corps, by inclusive dates of each period, previous to current appointment: None.

Current appointment: Place, New York City. Date of oath, June 1, 1917.

ASSIGNMENT TO THIS HOSPITAL

Joined: Date, June 7, 1917, 191 , from New York City.

per order of the Surgeon General, dated June 1, 1917.

LAST PAID

by Capt. U. V. Jones, Q. M. C., to include June 30, 1917.

ABSENCES UNDER CURRENT APPOINTMENT

(To include all leaves, with or without pay, and all absences without leave, at this and at prior stations.)

From—	To—	No. of Days.	Remarks. (State character of absence, as leave with pay, leave without pay, without leave.)	From—	To—	No. of Days.	Remarks. (State character of absences, as leave with pay, leave without pay, without leave.)
None							

RELIEF FROM DUTY AT THIS HOSPITAL, AUTHORITY THEREFOR, DATE OF DEPARTURE AND DESTINATION

Left this hospital July 20, 1917, to proceed to Letterman General Hospital, Presidio of San Francisco, Cal., for duty, per par. 2, S. O. 115, Headquarters Southern Dept., Fort Sam Houston, Texas, dated July 15, 1917.

I CERTIFY that the foregoing is a correct statement from the notations on the above-named nurse's letter of appointment and the records of this hospital.

R. F. Metcalfe

Date, July 20, 1917, 191

Place, Base Hospital No. 1, Ft. Sam Houston, Tex. Major, Medical Corps, U. S. Army.

Commanding Hospital. Surgeon.

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Form 64.
MEDICAL DEPARTMENT, U. S ARMY.
(Authorized July 23, 1915.)

MORNING REPORT, ARMY NURSE CORPS.

Date June 19, *191* 7.

Hospital Base Hospital No.1,Ft.Sam Houston Texas.

PRESENT AND ABSENT.							
PRESENT.			ABSENT.			Total present and absent.	Present and absent last report.
For duty.	Sick.	Total.	With leave.	Without leave.	Total.		
49	1	50	1		1	51	51

CHANGES SINCE LAST REPORT.					
GAIN.			LOSS.		
By appointment.	By transfer.	Total.	By discharge.	Transferred.	Total.

Remarks:

E.D.Reid
Chief Nurse.

3—3457

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Form 68
MEDICAL DEPARTMENT, U. S. ARMY
(Revised July 21, 1913)

RETURN OF THE NURSE CORPS

AT

Base Hospital,
Ft. Sam Houston, Texas.

FOR THE MONTH ENDING

JUN 30 1917, *191*

☞ Enter record marks and numbers below this line.

INSTRUCTIONS.

1. The return will give, in two groups, the names of all the nurses who have been on duty with or assigned or attached to the organization during the month or any part of it. In the first group, under the heading "Belonging to the formation at the end of month" written across the face of the return, will be recorded, in alphabetical order, all the nurses on duty with or under assignment to the formation at midnight of the last day of the month, whether present or absent. In the second group, under the heading "Losses since the preceding return," will be recorded all nurses who, having been on duty with or under assignment to the formation during any part of the month, have on or before midnight of the last day thereof been relieved from such duty or assignment.

2. All changes in the status of the several nurses which have taken place since the preceding return, with the date of the change in each instance, will be indicated under *Remarks*. 1—cm

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Par 98 M. M. D.

RETURN OF THE NURSE CORPS

at Base Hospital No.1,Fort Sam Houston,Texas.
(Here insert name of post or station, and department; or, in the field, the designation of the military formation to which attached.)

for the month ending June 30,1917, *191*

NAME.	LEAVE WITH PAY. From—	To—	LEAVE WITHOUT PAY. From—	To—	LAST PAID TO INCLUDE— (Give date.)	REMARKS. (Transfers, etc. Give dates.)
1. Doe,Mary E.					June 30,1917	Reported for duty at this hospital June 7,1917,from New York City,per order of the Surgeon General,dated June 1,1917.
2. Martin,Edith T.					June 30,1917	

Date, June 30,1917

Place, Base Hospital No.1,Ft.Sam Houston,Tex.

R.F.Metcalfe
Major,Medical Corps,
Commanding Hospital. *Surgeon.*

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INSTRUCTIONS.

1. This form will show in the case of each nurse the *character* of her work (whether *head nurse, nurse, housekeeper, on special detail*, etc.), the *quality* of her work, her *general conduct* as a nurse or woman, and her *general health* (*excellent, good, fair* or *poor* in each instance).

2. Nurses will be reported in the *Class* column in four classes, viz: Class 1, those who are well adapted in every respect for army work; class 2, those who are suitable for retention in the Army, though not so thoroughly satisfactory as class 1; class 3, those who are not adapted for army work, and are recommended for discharge when a seasonable opportunity occurs; class 4, those who have been recommended for immediate discharge for misconduct.

3. Under *Remarks* the reasons for any unsatisfactory rating will be fully stated, infractions of discipline will be noted, and the nature of special details indicated. When marked executive ability is exhibited by a nurse it will be mentioned under this head.

4. In forwarding efficiency reports prepared by a chief nurse the surgeon will indorse thereon whether he concurs in the gradings reported by her; and he will add in his indorsement on the monthly reports his opinion of the efficiency of the chief nurse, specifying in detail the character and quality of the service rendered by her. 8—4668

Form 62
MEDICAL DEPARTMENT, U. S. A.
(Revised July 23, 1915)

ARMY NURSE CORPS

EFFICIENCY REPORT

FROM

Base Hospital No.1,Ft.Sam Houston,
(Designation of hospital, etc.)

Texas.

FOR THE MONTH OF

June 30, 1917.
(If special, write word "Special" with date.)

☞ Enter record marks and numbers below this line.

1st INDORSEMENT.

Base Hospital No.1,Ft.Sam Houston,Tex. June 30,1917 - To the Surgeon General, Washington,D.C.,through the Department Surgeon,Southern Dept.,Ft.Sam Houston, Texas,concurring in the grading of the chief nurse. The services of the Chief Nurse, Nellie Johnson,have been (filled in by the Commanding Officer).

R.F.Metcalfe

Major,Medical Corps,
Commanding Hospital.

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Par 99 A. M. O.

EFFICIENCY REPORT OF NURSES

at Base Hospital No.1,Fort Sam Houston,Texas.
(Here insert name of post or station, and department; or, in the field, the designation of the sanitary formation to which attached.)

for the month ending June 30, *1917*.

Name.	Character of Work.	Quality of Work.	General Conduct.	General Health.	Class.	Remarks.
1. Hill,Esther M.	Housekeeper	Good	Good	Good	1	
2. Jones,Anne T.	Operating - room nurse.	Good	Good	Good	1	
3. Smith,Mary E.	Head nurse	Good	Good	Good	1	
4. Marsh,Helen	Nurse	Good	Good	Good	1	

Nellie Johnson
Chief Nurse, U. S. Army.

Date, June 30,1917

Place, Base Hospital No.1,Ft.Sam Houston,Tex.

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USED WHEN THERE IS ONLY ONE EMPLOYEE OR WHEN EMPLOYEE IS DISCHARGED OR HAS RESIGNED PRIOR TO END OF MONTH

WAR DEPARTMENT
Form No. 383.
Approved by the Comptroller of the Treasury April 29, 1914

WAR DEPARTMENT

Medical Department.
(Bureau or Office.)

Voucher No.....
General account.....
Detail account.....

PAY VOUCHER
PERSONAL SERVICES

APPROPRIATION: ..... Symbol..... $.....
APPROPRIATION: ..... Symbol..... $.....

THE UNITED STATES,

TO Martha Johnson, ..., DR.

ADDRESS: 1005 Virginia Boulevard, San Antonio, Tex.

Object Symbol		Days Served	Rate per day	Amount	U. S. Notations
	For SERVICES rendered as mail, nurses' quarters under authority of telegram, S.G.O., dated June 28, 1916, from June 1, 1917, to June 16, 1917, inclusive, at $20.00 per month.	16	66 2/3	10.67	
	Less deduction for				
	REMARKS: Resigned to take effect at close of business June 16, 1917.			10.67	

Examined by .....

I CERTIFY that the above bill is correct, and that the payment therefor has not been received.

DO NOT SIGN IN DUPLICATE. Martha Johnson

I CERTIFY that the foregoing account is correct; that it appears from the records of my office that the person named thereon was legally appointed or employed; that he has performed the service required by law and the regulations of the War Department during the period mentioned; that such service, except as otherwise indicated under "Remarks," has been performed under my supervision; that the person whose name appears in the foregoing voucher is not paid for any period of absence in excess of that allowed by law; that he is entitled to the amount of pay stated above, and that any detail is indicated under "Remarks."

R. F. Metcalfe,
Major, Medical Corps.
(Title)

APPROVED FOR $.....

Date ....., 191

Paid by check No. ....., dated ....., 191 , of .....

on ....., in favor of payee named above, for $.....

OR

Received ....., 191 , of ....., IN CASH, the sum of ..... dollars and ..... cents, in full payment of the above account.

.....

$ [redacted]

.....

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USED WHEN THERE IS ONLY ONE EMPLOYEE OR WHEN EMPLOYEE IS DISCHARGED OR HAS RESIGNED PRIOR TO END OF MONTH.

WAR DEPARTMENT
Form No. 333.
Approved by the Comptroller of the Treasury April 29, 1914

WAR DEPARTMENT

Medical Department.
(Bureau or Office.)

Voucher No.....
General account.....
Detail account.....

PAY VOUCHER
PERSONAL SERVICES

APPROPRIATION: ..... Symbol..... $.....
APPROPR'ATION: ..... Symbol..... $.....

THE UNITED STATES,

To Martha Johnson., DR.

ADDRESS 1005 Virginia Boulevard, San Antonio, Tex.

Object Symbol		Days Served	Rate per day	Amount	U. S. Notations
	For SERVICES rendered as maid, nurses' quarters under authority of telegram, S.G.O., dated June 23, 1916, from June 1, 1917, to June 16, 1917, inclusive, at $ 20.00 per month.	16	66 2/3	10.67	
	Less deduction for				
	REMARKS: Resigned to take effect at close of business June 16, 1917.			10.67	
					Examined by

MEMORANDUM VOUCHER
(To be filled in and retained by paying officer)

Voucher certified by .....

Voucher approved by .....

Paid by check No. ....., dated ....., 191 , of .....
on ....., in favor of payee named above, for $.....

OR

Paid in cash ..... (Date) by .....
..... dollars and ..... cents.

Funds derived from check No. ..... on .....

$ [redacted]

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See Pa. 118 Jan. 20.

BASE HOSPITAL NO. 1.
FORT SAM HOUSTON, TEXAS.
May 18, 1917.

From: The Commanding Officer.

To: The Surgeon General, U. S. Army, Washington, D. C.,
(Thru Department Surgeon).

Subject: Civilian Employees.

1. Report the employment of Martha Johnson as maid in Nurses' Quarters at salary of twenty ($20.00) dollars per month, in lieu of Ella Sledge, under date of May 18, 1917.

R. F. Metcalfe,
Major, Medical Corps.

Form 74
Medical Department, U. S. A.
(Revised June 20, 1916)

MESS ACCOUNT

OF THE HOSPITAL AT

Base Hospital No. 1.
Fort Sam Houston, Texas.

FOR

May, 1917.

3—2003

INSTRUCTIONS

1. A monthly account on this form will be kept by the noncommissioned officer in charge of each hospital mess. It will be filed at the end of the month with the retained Hospital Fund papers for the month.

2. When there is more than one hospital mess a monthly consolidated mess account on this form for the entire hospital will be kept in the hospital office, the noncommissioned officers in charge of the several messes being required to report daily the data therefor.

3. The *mess account* is not a cash account and is not intended as a record of cash paid out or cash received. It is rather a statement of liabilities incurred and earnings made each day.

4. The columns for "Purchases" are to show the amounts purchased each day, whether paid for or not at the time of purchase; also the amounts of gratuities earned each day.

5. The column "Income" is to show the amount accruing to the Hospital Fund each day on account of commutation of rations, whether the same is paid or not; also amounts accruing to the Fund from other sources, e. g., from savings on rations drawn in kind, to be entered as the amounts saved are ascertained, post exchange dividends, as the same are declared, proceeds of sales of Hospital Fund property, as the sales are made, etc. Income from commutation should be entered in black ink; income from other sources in red.

6. The column "Obligations" is for the daily total of the columns for "Purchases."

7. The "Gain on day" is the difference between the "Income" and the "Obligations" of that day when the income is the larger; the "Loss on day" is the difference when the obligations are the larger.

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MESS ACCOUNT OF THE HOSPITAL AT Base Hospital No. 1

DAY OF MONTH	RATIONS COMMUTED AT C. PER DAY 30¢	RATIONS COMMUTED AT C. PER DAY		PATIENTS AT PER DAY 40¢	PATIENTS AT PER DAY $1.00		PURCHASES AND GRA (Insert names of creditors) Q.M.C. $	J. Smith $	T. Brown $	$	$	$	$	
1	93			3			6.00	.20						
2				3			2.00	.20						
3				4			3.00	.20						
4				3				.20						
5				4				.20						
6				3			1.50	.20						
7				5				.20						
8				6			1.30	.20						
9				3				.20						
10				1				.20						
11				2			1.30	.20	3.50					
12				4				.20						
13				1				.20						
14				7			1.00	.20						
15				2				.20						
16				3			1.00	.20						
17				4				.20						
18				1			2.00	.20						
19				3				.20						
20				3			1.50	.20						
21				1				.20						
22				2	1		1.20	.20						
23				3	1			.20						
24				1	1			.20						
25				2			1.00	.20						
26				1				.20						
27				3			1.00	.20						
28				4				.20						
29				2			1.00	.20						
30				1				.20						
31				3			2.00	.20						
TOTAL	93			88	3		26.80	6.20	3.50					

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Fort Sam Houston, Texas DURING May, 191 7.

TUITIES EACH DAY (In column heads)							INCOME ACCRUED ON DAY	OBLIGATIONS INCURRED ON DAY	+ GAIN ON DAY	+ TOTAL GAINS TO DATE	− LOSS ON DAY	− TOTAL LOSSES TO DATE	DAY OF MONTH
$	$	$	$	$	$	$							
							29.10	6.20	22.90	22.90			1
							1.20	2.20			1.00	1.00	2
							1.60	3.20			1.60	2.60	3
							1.20	.20	1.00	23.90			4
							1.60	.20	1.40	25.30			5
							1.20	1.70			.50	3.10	6
							2.00	.20	1.80	27.10			7
							2.40	1.50	.90	28.00			8
							1.20	.20	1.00	29.00			9
							.40	.20	.20	29.20			10
							.80	5.00			4.20	7.30	11
							1.60	.20	1.40	30.60			12
							.40	.20	.20	30.80			13
							2.80	1.20	1.60	32.40			14
							.80	.20	.60	33.00			15
							1.20	1.20					16
							1.60	.20	1.40	34.40			17
							.40	2.20			1.80	9.10	18
							1.20	.20	1.00	35.40			19
							1.20	1.70			.50	9.60	20
							.40	.20	.20	35.60			21
							1.80	1.40	.40	36.00			22
							2.20	.20	2.00	38.00			23
							1.40	.20	1.20	39.20			24
							.80	1.20			.40	10.00	25
							.40	.20	.20	39.40			26
							1.20	1.20					27
							1.60	.20	1.40	40.80			28
							.80	1.20			.40	10.40	29
							.40	.20	.20	41.00			30
							1.20	2.20			1.00	11.40	31
							66.10	36.50					TOTAL

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Form 49
Medical Department U. S. Army
(Revised July 8, 1916)

STATEMENT OF THE HOSPITAL FUND

AND

RETURN OF DURABLE PROPERTY

PURCHASED WITH THE HOSPITAL FUND

AT

Base Hospital No.1, Fort Sam Houston, Tex.

For May, 1917.

BY

John Smith,

Captain, Medical Corps.
U. S. Army,
Commanding Hospital.

INSTRUCTIONS

1. The custodian of the Hospital Fund will, within five days after its audit, at the end of every month and when relieved from its custody, forward a Statement thereof on this form to the department surgeon (if the command to which it pertains is subject to the orders of a department commander), to the division surgeon (if the command is a part of a mobilized division), or to the surgeon base group (if the command is under the orders of the commanding officer of a line of communications), or, in the case of an independent post, to the Surgeon General, accompanied by the prescribed vouchers. The department surgeon, the division surgeon, or the surgeon base group, as the case may be, will take such action in the premises as he deems appropriate, and will in due season forward the Statement with his approval or comment to the Surgeon General. If the department surgeon, the division surgeon, or the surgeon base group, approves the Statement he will return the vouchers to the hospital for file. If he does not approve he will forward all the papers to the Surgeon General.

2. All moneys on hand at the beginning of the month and all received during the month will be entered on the debit side of the Statement against the appropriate items. Debit vouchers will be filed with the Statement for all moneys received. The debit vouchers for payments made by the quartermaster into the Fund will be in the form of certificates signed by the quartermaster, one certificate for each class of payments, showing to whom the payments were made, their dates and amounts, and what they were for, respectively (as, e. g., **on Ration and Savings account of the Medical Department detachment**, stating the period; or **on account of commutation of rations for enlisted men sick in hospital**, stating the period, the number of rations, and the rate of commutation, etc.). Payments of dividends from the post exchange and post garden should be certified in like form by the custodians of the funds thereof. In debiting moneys received from officers, and from civilians of the several classes (e. g., **civilians on the status of officers** and **civilians on the status of enlisted men**) treated in hospital, the total amount only received from each class of patients will be entered on the Statement, reference by number being made to the corresponding voucher for each class. The voucher will be in the form of a list certified by the custodian of the Hospital Fund giving the name of each individual patient of the class covered by it, the number of days and the period of treatment for which charges were made, and the rate of charge per day. In debiting moneys received from a sale of Hospital Fund property only the gross thereof will be entered, reference being made to the number of the voucher covering the sale. The voucher will be in the form of an exhibit certified by the selling officer showing the date or period of sale, the articles sold, the prices of sale, and the amount received from each purchaser, together with a certificate, if the selling officer is other than the custodian of the Hospital Fund, that he has paid the gross over to the custodian, and the date of such payment over.

3. Expenditures for articles of food will be credited under a subheading "Food Supplies;" other expenditures under "Miscellaneous." The payments under each head will be listed separately, showing the numbers of the vouchers therefor, the names of the individuals or firms to whom the payments were made, the amounts paid them, respectively, and their aggregate. The vouchers will, usually, be in the form of receipted bills, giving in detail the date of purchase, the kind, quantity, and cost of each article, or the nature of the service rendered and the rate per day or month. The balance remaining on hand at the end of the month or period will be brought down at the foot of the credit side.

4. All indebtedness against the Fund outstanding and unpaid at the end of the period covered by the Statement will be listed on the credit side, giving the name of each creditor, what the debt is for in general terms, the date of its incurrence, and its amount. This amount, however, will not be entered in the total money column nor added into the footing, as it does not represent cash paid out. Ordinarily there should be no indebtedness. (a) All amounts due to the Fund from any source should in like manner be listed on the debit side, but not added into the total money column. (b) If there are no outstanding debts, entry to that effect will be made in the space provided for the list of debts, and if there are no amounts due, a corresponding entry will be made in the space provided for the list of amounts due. (c) The officer who signs the Statement and thereby certifies to the correctness of these lists will be held personally liable for any outstanding debts or amounts due not exhibited therein.

5. Articles of durable property purchased with the Fund, including shares in the post exchange, will be accounted for on the reverse of every Statement for January, and of every Statement showing a transfer of accountability. Otherwise, when there have been no additions to or dispositions of such property, the entry "No change" will be written across the face of the return on the Statements for subsequent months of the calendar year up to and including the Statement for December.

6. Should durable property be on hand, but no Hospital Fund, the words "No Fund on hand" will be written across the face of the Statement. Should Hospital Fund be on hand, but no durable property, the words "No property on hand" will be written across the face of the return. Should there be neither Hospital Fund nor durable property on hand, that fact may be reported by letter in lieu of the combined Statement and return on this form.

7. Invoices and receipts for Hospital Fund or hospital fund property transferred will not be required; but upon the complete transfer of Fund and property from one custodian to another the new custodian will acknowledge the receipt thereof by entry over his signature across the face of the old custodian's final Statement and return.

8. A duplicate of each Statement and return will be filed with the retained records of the hospital.

9. The duplicate Statements will constitute the council book of the hospital council, the proceedings of which as prescribed by Army Regulations will be recorded therein. Extra sheets when necessary will be inserted for the record of the proceedings of the hospital council.

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Form

STATEMENT OF THE HOSPITAL FUND at Base Hospital

DR.

Number of Voucher	RECEIPTS	Dollars	Cts.
	Balance on hand per last statement,	30	00
	Cash received from Quartermaster Corps:		
1	On Ration and Savings Account for May 1917	27	90
	On account of commutation of rations—		
2	For enlisted men sick in hospital, May 1917	35	20
	For applicants for enlistment sick in hospital,		
	For general prisoners sick in hospital,		
	For members of the Army Nurse Corps on duty in hospital,		
	Cash received from Post Exchange,		
	Cash received from Post Garden,		
	Cash received from other sources, as follows:		
3	Officers sick in hospital	3	00
	Amounts due to fund, not yet received, viz		
	None		
	TOTAL,	96	10

Examined and approved:

_____

_____ *U. S. Army.*

_____

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See par 237 M.M.O. 248-262 M.M.O.

No. 1. Fort Sam Houston, Texas, during May, 1917.

CR.

Number of Vouchers	EXPENDITURES Food Supplies.	Dollars	Cts.
1	Q.M.C. Fort Sam Houston, Texas,	28	60
2	J. Smith, San Antonio, Texas.	6	20
3	T. Brown, San Antonio, Texas.	3	50
	Turned over to successor 1st Lt. W. C. Hill, M.C.	57	80
	Received from Captain John Smith, Medical Corps the sum of fifty-seven and 50/100 dollars and the articles of durable property listed as transferred on reverse side hereof.		
	W. C. Hill, 1st Lt. Med. Corps.		
	Outstanding bills remaining unpaid, viz: None		
	Balance on hand this date:	00	00
	On deposit in		
	Otherwise kept		
	Total balance		
	TOTAL,	96	10

I certify that the above Statement is true; that the moneys were received and paid out as herein shown; that the list of amounts due to the fund on the debit side includes all amounts so due, and that the list of outstanding bills on the credit side is a complete and accurate statement of all outstanding debts and obligations to date payable from this Fund.

John Smith

Captain, Medical Corps, *U. S. Army,*
Commanding the Hospital.

Date, May 31, 1917.

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Par 248-762 M. M. 40.

$27.90 Rcpt. Vo. #1

Fort Sam Houston, Texas,
May 31, 1917.

I certify that I have paid Captain John Smith, Medical Corps, the sum of twenty seven and 90/100 Dollars value of 93 rations at 30¢ each due detachment Medical Department for month of May, 1917.

Thomas Jones,
Captain, Q.M.C.,
Quartermaster.

Par 248-762 M. M. 40.

$35.20 Rcpt. Vo. #2

Fort Sam Houston, Texas,
May 31, 1917.

I certify that I have paid Captain John Smith, Medical Corps the sum of Thirty five and 20/100 Dollars commutation of 88 rations at 40¢ each due for enlisted men sick in hospital during May, 1917.

Thomas Jones,
Captain, Q.M.C.,
Quartermaster.

Par 248-762 M. M. 40.

$3.00 Rcpt. Vo. #3

Base Hospital #1,
Fort Sam Houston, Texas.
May 31, 1917.

I certify that I have received amounts listed below for subsistence of officers sick in hospital during May, 1917.

Name and Rank.	Time in hospital.	Rate per day.	Amount.
Jones, R. L. 1st Lt., C.A.C.	June 22-24, 1917.	$1.00	$3.00

John Smith,
Captain, Medical Corps,
Surgeon.

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Par 248-76 2 M. M. D.

Fort Sam Houston, Texas,
May 31, 1917. Exp. Vo. #1

Base Hospital #1
Fort Sam Houston, Texas.

To The Quartermaster Corps Dr.

Stores purchased during month $ 28.60

Received payment.

Thomas Jones,
Captain, Quartermaster Corps,
Quartermaster.

Par 248-76 2 M. M. D.

San Antonio, Texas. Exp. Vo. #2
May 31, 1917.

Base Hospital #1,
Fort Sam Houston, Texas.

To J. Smith. Dr.

62 quarts fresh milk @ 10¢ $ 6.20

Received payment, May 31, 1917.

J. Smith.

San Antonio, Texas, Exp. Vo. #3
May 31, 1917.

Base Hospital #1,
Fort Sam Houston, Texas.

To T. Brown Dr.

100 lbs. potatoes @ 3½¢ $ 3.50

Received payment May 31, 1917.

T. Brown.

Par 248-76 2 M. M. D.

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RETURN OF DURABLE PROPERTY purchased with the Hospital Fund, on hand at last return, received, transferred, sold, lost, etc., and remaining on hand at Base Hospital No.1, Fort Sam Houston, Texas. *for the period ending* May 31, 1917, *191* (SEE NOTE 5)

1917.		Cots	REMARKS
May 1	On hand from last return	1	
	Purchased during month		
	Received		
	Total to be accounted for	1	
	Transferred	1	Transferred to successor
	Sold		
	Lost or destroyed by unavoidable accident		
	Otherwise disposed of		
	Total disposed of	1	
	On hand to be accounted for	0	

I certify that the foregoing return is correct.

John Smith,

Captain, Medical Corps, *U. S. Army.*

8—6480

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Form 35
MEDICAL DEPARTMENT, U. S. ARMY
(Revised June 11, 1915)

~~ANNUAL~~ ~~QUARTERLY~~ *
EMERGENCY *

SPECIAL REQUISITION

FOR

~~POST MEDICAL~~ * ~~DEPOT~~

SUPPLIES

REQUIRED AT

Base Hospital, #1
~~Fort Sam Houston, Texas~~

BY

William L.Sheep,
Captain, Medical Corps.
Property Officer

FOR THE

Period ending
June 30, 1917, 19

* Erase with pen the words not applicable.

c 3—2806

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See Par 482 M. M. D.

[redacted] EMERGENCY* SPECIAL REQUISITION FOR POST MEDICAL* [redacted] SUPPLIES

STATION: Base Hospital No.1, Fort Sam Houston, Texas

FROM May 22, 1917 19 , TO June 30, 1917 19

COMMAND: Officers and Enlisted Men, 2445; Others, 1160; Total, 3605; No. of Beds, 700

[* Erase with pen the words not applicable.]

ARTICLES		EXPENDED during year ended Dec. 31 last	ON HAND	WANTED	REMARKS (The necessity for the articles required for will be plainly and briefly set forth under this head)
Acacia, pulvis,	Botts	26	0	24	Supply exhausted.
Aqua ammonia,	"	178	3	60	Supply inadequate.
Aspirin,	"	306	0	60	Supply exhausted.
Bismuthi subnitras,	"	32	0	12	" "
Chloroformum,	Tins	725	25	200	Supply inadequate.

APPROVED:- R.F.METCALF,

Major, Medical Corps, Surgeon.

I CERTIFY that the supplies asked for are necessary for the public service for the reasons set forth under the head of "Remarks," and that no more of them are on hand than as stated.

William L. Sheep,

Captain M.C., Property Officer

Date, May 22, 1917 19

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Form 12
MEDICAL DEPARTMENT, U. S. ARMY
(Revised November 28, 1904.)

Voucher No. 1

INVOICE OF ARTICLES PURCHASED

RETURN OF MEDICAL PROPERTY

OF

William L. Sheep,
Captain, Medical Corps,
Property Officer

....., *U. S. Army,*

Base Hospital, #1
at Fort Sam Houston, Texas

for Current period, *191*

☞ Enter record marks and numbers below this line.

NOTES

1. In the column MEASURE OR COUNT designate the units of purchase, as "liters," "kilos," "gallons," "yards," "bottles," "tins," "tubes," "cakes," "papers," "packages," etc., as the case may be. If the purchase is by count write "number," "gross," "pairs," etc. In the column QUANTITY enter in figures the number of articles, liters, bottles, packages, dozens, etc., bought.

2. One copy of this Invoice will be forwarded to the Surgeon General with the money vouchers upon which payment for the articles is made. The accountable officer will retain a duplicate.

2—2304

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See Par. 476 M. M. D.

Form 12

INVOICE OF ARTICLES RECEIVED BY PURCHASE, May 5th-10th and 20th (Dates of delivery) 191 7 .

from Noe Spears Company, #127 Losoya St., San Antonio, Texas

by R. F. Metcalfe, Major, Medical Corps, U. S. Army.

at Base Hospital, Fort Sam Houston, Texas.

ARTICLES, WITH KIND AND SIZE OF CONTAINERS, IF ANY	MEASURE OR COUNT (Note 1)	QUANTITY (Note 1)
Nosepieces for sommoform inhaler,	Number	2
Glass Ys for Murphy Drip	"	8
Gas, oxygen, 350-gallons,	Cylinders	2
Gas, Nitrous-oxide, 1280-gallons,	"	3

The articles above named were received in good condition, and will be accounted for on my Return of Medical Property for Period 7, 191

Date, June 1, 1917, 191

William L. Sheep,
Captain, Medical Corps, U. S. Army.
Property Officer

Voucher No. 1, Abstract of Disbursements for ____, 191

Appropriation, "Medical and Hospital Department, 191 ."

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Voucher No. 25

REPORT OF SURVEY

on Medical (Class of property.) *Property*

Base Hospital, #1
Fort Sam Houston, Texas (Station or organization.)

June 27, 1917 *, 191*

John Smith, Captain, M C
(Name and rank of accountable officer.)

INSTRUCTIONS

1. **Use, number of copies, and disposition.**—This form will be used in making reports of survey on all classes of public property acted upon by a surveying officer. Each report will be made in triplicate and disposed of as prescribed in Army Regulations. In the column headed "Date and Circumstances" will be entered a statement of the circumstances attending the loss, damage, or destruction of the articles surveyed, and, in the case of ordnance stores, the date of their receipt.

2. **Classes of Property.**—Property of different staff departments, or property carried on separate returns, will not be entered on the same report, but separate reports will be made for each class of property.

3. **Documentary Evidence.**—Where documentary evidence is submitted, it will be marked "Exhibit A," "Exhibit B," etc., and will be so noted and referred to by the surveying officer in his report. All documentary evidence will be inserted and fastened between the leaves of the report.

4. When any stores are included that have been lost, destroyed, or damaged by means other than fair wear and tear in the service, the facts will be sworn to as indicated on page 2. If the oath is subscribed to by the responsible officer the certificate need not be subscribed to. If the oath is subscribed to by any other individual than the responsible officer, he will subscribe to the certificate.

5. In case property that is unserviceable through fair wear and tear in the service only is covered by the survey the certificate only will be completed by the signature of the responsible officer, but the surveying officer will exercise great care in examining such property and state in his findings whether he found that its unserviceable condition is due to fair wear and tear in the service. In case its unserviceable condition is not found to be due to such cause he will fix responsibility for such damage upon the proper party.

6. **Army Regulations.**—The survey of property is covered in paragraphs 710–726, Army Regulations (1913), which define the duties of surveying officers, fix the power of the convening authority, and give instructions relative to the preparation and disposition of survey reports. For survey of band instruments, see also A. R. 1179, of china and glassware of outgoing organizations, see also A. R. 1023; of silken colors, standards, and guidons, see also A. R. 239.

7. For classes of unserviceable property that may be destroyed or turned in to depot on approved recommendation of a surveying officer, see A. R. 678, 717, 907, 1520, 1534, and 1537, as amended.

8. **Brass Trimmings.**—Before leather or other stores belonging to the Ordnance Department are destroyed or broken up, all rings, buckles, and other trimmings of brass will be cut off by enlisted labor and turned over to the post ordnance officer, and the certificate of the officer witnessing the destruction will contain a statement to the effect that these articles have been removed and turned over to the post ordnance officer. (For the disposition of this material by post ordnance officers, see paragraph III, General Orders No. 9, War Department, 1911.)

9. **Loss of Small Arms.**—When a survey is made on the loss of small arms, the report must show whether or not the arms were stored at the time of the loss in arm racks or arm lockers furnished by the Ordnance Department for their safe-keeping, or were being used at the time in the performance of military duty. In all cases the report must show clearly whether or not every reasonable precaution was taken to prevent the loss. In this connection see par. 5 of the G. O. No. 20, War Dept., May 26, 1916, regarding issue of arm racks and arm chests for the safe-keeping of small arms, etc.

10. **Survey Reports Subvouchers to Statements of Charges.**—Reports of survey authorizing charges against enlisted men, including deserters, are subvouchers to the Statement of Charges and will accompany it.

11. **Desertions.**—Whenever public property is lost in consequence of the desertion of an enlisted man, a surveying officer will report on the missing property, but its value can not be charged against the deserter in the absence of an approved report of survey to that effect. (Paragraphs 116 and 687, A. R., 1913.) 62—730

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See Par 710-726 G. R.

NOTE.—Read carefully the instructions on the back of this blank before Preparing report

Page 1

Medical Property — Property Submitted for Survey
(Class of property.)

Responsible officer: John Smith, Captain, Medical Corps.

Accountable officer: John Smith, Captain, Medical Corps.

Quantity.	ARTICLES.	VALUE. Dolls.	VALUE. Cts.	Disposition.*	Issued.	DATE AND CIRCUMSTANCES. (See Instruction No. 1.)
2	Bags, rubber, h w	1	80	D		Fair wear and tear.
2	Bags, rubber, ice	2	10	D		Fair wear and tear

The articles indicated have been issued by me, and those directed turned in have been received by me.

U. S. Army,
Supply Officer.

The articles indicated above as turned in have been turned in by me, and those indicated as issued have been received by me.

U. S. Army,
Organization Commander.

Destroyed.	Value.
Previously this quarter	
On this survey	
Total to date	
Maximum authorized	
Balance or excess	

(Line out words not needed)

* Abbreviations as follows: To be destroyed, D; held for inspector, I; use in repair, R; continued in service, S; turn in to supply officer, T.

Form No. 196, A. G. O.
Ed Aug. 25-16—200,000.

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Page 2

I do solemnly swear that the articles of public property named hereon were lost, destroyed, or damaged, in the manner stated, while in the public service.

.....
(Name.)

.....
(Rank and organization.)

Sworn to before me, and subscribed in my presence, this ..... day of ......, 191

.....
(Name.)

.....
(Rank and organization.)

.....
(Office.)

See instructions on back of this sheet.

I certify that the loss, destruction, damage, or unserviceability of the articles of public property named hereon was occasioned by unavoidable causes, and without fault or neglect on my part; and that each article listed hereon with a view to elimination by destruction, has been examined by me personally, has never been previously condemned, has become unserviceable in the manner stated herein, and is, in my opinion, worthless for further public use.

John Smith.
(Name.)

Captain, Medical Corps.
(Rank and organization.) *Responsible Officer.*

Fort Sam Houston, Texas, June 20, 1917. To 1st Lt. W. F. Rice, M.C.
who, by order of the commanding officer, is appointed surveying officer on the articles of public property named hereon.

W. A. Jones.
(Name.)

Captain, 20th Infantry.
(Rank and organization.) *Adjutant.*

I have examined all available testimony in this case, and it is my belief that .....

1. That articles listed hereon became unserviceable through fair wear and tear in the public service.

2. That their condition is not due to fault or neglect on the part of the responsible officer.

W. F. Rice
1st Lieut. M.C.
Surveying Officer

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Page 8

RECOMMENDATIONS

1. That the responsible officer be relieved from responsibility and the accountable officer authorized to drop them from his return of medical property.

2. That the articles be disposed of as indicated on page 1 hereof.

LIST OF WITNESSES:

Captain John Smith, M.C.

Sgt. 1 cl. Thomas Jones, Med. Dept.

W. F. Rice, (Name.)
1st Lt., Medical Corps. (Rank and organization.) *Surveying Officer.*

APPROVED:

Thomas Brown, (Name.)
Colonel, 20th Infantry. (Rank and organization.) *Commanding.*

FIRST INDORSEMENT

Fort Sam Houston, Texas, June 27, 1917. To 1st Lt. A. C. Williams, M.C. who will witness the destruction of the unserviceable property, the destruction of which, as approved by me, is recommended by the surveying officer.

I have personally inspected the property and, in my opinion, it has no salable value.

The articles of ordnance property designated for destruction are utterly worthless.

Thomas Brown, (Name.)
Colonel, 20th Infantry. (Rank and organization.) *Commanding.*

SECOND INDORSEMENT

Fort Sam Houston, Texas, June 28, 1917. To the Commanding Officer:

I have this day witnessed the destruction of the property referred to in the foregoing indorsement, and have complied with paragraph 9 of the instructions on the back hereof.

A. C. Williams, (Name.)
1st Lt., Medical Corps. (Rank and organization.)

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See par 680 G.R.
" " 243 and 510

Form No. 1, I. G. D. Authorized December 27, 1907. 14.14.10.

INVENTORY AND INSPECTION REPORT

Of Medical Property

Pertaining to Base Hospital No. 1, Ft. Sam Houston, Texas.
(Station or organization.)

Accountable Officer: John Smith, Captain, Medical Corps.

Inspected at Ft. Sam Houston, Texas.

On June 1, 1917.

By Charles Brown, Major, I.G.

DIRECTIONS.

1. This form will be used for the inventory and inspection of property (except public animals) for condemnation in all the departments of the Army.

2. Separate inventories will be made for the property pertaining to each staff department; for buildings as distinct from other property, and for "subsistence property" as distinct from "subsistence stores;" also for the articles of ordnance, engineer, and signal property mentioned in paragraph 6 of these directions as requiring special authority of the Secretary of War for their submission for the action of an inspector.

3. An officer signing an inventory will add his official title, and, if commanding a company or detachment, the letter or number of the company and the regiment or corps should also be added.

4. Public property which has been damaged, except by fair wear and tear, or is unsuitable for the service, before being submitted to an inspector for condemnation, will be surveyed by a disinterested officer, preferably the summary court officer. (A. R. 713.)

5. If an inspection of property follows the report of a survey thereon, one copy of the proceedings will accompany the inventory and inspection report which is transmitted for approval, and will afterwards be returned to be used as a voucher to the officer's returns. (A. R. 728.)

6. Special authority must be obtained for submission of property to an inspector, as follows:

Of the Secretary of War: Cannon and their carriages, machine and automatic guns with their carriages and mounts, but not including spare parts, accessories, implements and equipments required in their maintenance and operation; also ammunition for cannon. Electrical and mechanical installations and appliances furnished to the Coast Artillery Corps by the Engineer Department or the Signal Department and forming part of the permanent seacoast defenses. See A. R. 921, as amended by G. O. 177 W. D., 1909, and Cir. 14, W. D., 1909.

Of Quartermaster General: Old and unserviceable typewriting machines issued by the Q. M. Dept. (Cir. 6, Q. M. G. O., 1906.)

Of Chief Signal Officer: Unserviceable telescopes, field glasses, telephones, and expensive electrical apparatus. (A. R. 1584.)

Of Chief Surgeon of division or department: Damaged or unserviceable medicines, medical books, surgical or scientific instruments and appliances. (A. R. 1505.)

7. Attention is also invited to A. R. 682 and 911 to 922, inclusive, also G. O. 186, War Dept., 1907, and Cirs. 89 and 92, 1908, 79, 1909, and 51, 1910.

8. Inspection reports on buildings must be forwarded for the action of the Secretary of War. (A. R. 920.)

9. Under A. R. 921 all of the copies of the inspection report on cannon and their carriages, machine and automatic guns with their carriages and mounts, and ammunition for cannon; also electrical and mechanical installations and appliances furnished to the Coast Artillery Corps by the Engineer or Signal Departments, and forming part of the permanent seacoast defenses; must be forwarded by the department commander directly to the chief of bureau concerned for final action of the Secretary of War.

10. Inspectors will state under Remarks that all brass trimmings, etc., of Ordnance Stores to be destroyed are to be turned in to Post Ordnance Officer for shipment to arsenal.

(Ed. July 12-10—40,000)

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Page.....

INVENTORY BY THE RESPONSIBLE OFFICER.

1 ARTICLES.	2 QUANTITY.	3 TOTAL COST PRICE. If not known estimate it.	4 IS CONDITION DUE TO FAIR WEAR AND TEAR? If not, state how rendered unserviceable.	5 HAS PROPERTY BEEN SURVEYED? A. R. 682, 713, 728.	6 IF REQUIRED, HAS AUTHORITY FOR PRESENTATION TO INSPECTOR BEEN OBTAINED? See "Directions" 6.	
Apparatus X-Ray		$				1
Wappler	1	550 00	Yes	No	Yes	2
						3
						4
						5
						6
						7
						8
						9
						10

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REPORT BY THE INSPECTOR.

	7	To be dropped.		10	11	12	13
	To be continued in service.	8 To be destroyed.	9 To be broken up.	To be sold.	To be turned into depot or arsenal.	Total.	REMARKS. If special inspector, state authority and date here.
1							
2				1		1	
3							
4							
5							
6							
7							
8							
9							
10							

Fasten extra sheets here.

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FIRST INDORSEMENT.

Ft. Sam Houston, Texas, June 1, 1917.

I CERTIFY that this inventory, consisting of 1 sheets, is correct in every particular; that each article enumerated has been examined by me personally, has never been previously condemned, and is, in my opinion, unserviceable or unsuitable for further public use here, and requires the action of an inspector.

John Smith,

Captain, M.C.,

Responsible Officer.

SECOND INDORSEMENT.

Ft. Sam Houston, Texas, June 1, 1917.

I CERTIFY that I have carefully examined the articles enumerated within; that the disposition recommended is, in my judgment, the best for the public interest; that the articles recommended to be destroyed have no money value at or near the post, and that those found to be worthless have, as far as practicable, been destroyed in my presence.

Charles Brown,

Major, Insp. Gen.,

Inspector.

THIRD INDORSEMENT.

Hdqs. So. Dept., Ft. Sam Houston, Tex.

June 10, 1917.

The within named articles will be disposed of as recommended by the inspector.

By command of Major General Jones,

W. H. Robinson,

Department Adjutant.

3—621

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Form 28.
MEDICAL DEPARTMENT, U. S. A.
(Authorized January 18, 1908.)

Voucher No. 2

RETURN MEDICAL PROPERTY,

..... *Quarter, F. Y. 19*

INVOICE ~~RECEIPT~~

MEDICAL SUPPLIES TRANSFERRED

Date, June 10, , 1917.

From John Smith,

Major, Medical Corps, *U. S. Army,*

at Fort Sam Houston, Texas

To The Surgeon,

Fort Clark, Texas. *U. S. Army,*

at

If used as **Invoice** erase word "**Receipt.**"
If used as **Receipt** erase word "**Invoice.**"

Arrange articles in the order in which they appear on the Return. This Form may be used for both invoices and receipts. It will be made out in quadruplicate by the issuing officer, using typewriter and carbon process whenever practicable. The issuing officer will sign the two forms used as invoices, and forward them at once, one to the Surgeon General, and the other, with the two to be used as receipts, to the receiving officer. The latter will upon completion of the transfer sign the receipts and promptly forward them, one to the Surgeon General and the other to the issuing officer.

(Size 8 x 10 1-2 inches)

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See Par. 48-49 M. M. A.

Combination Blank, Invoice or Receipt.

TRANSFER OF MEDICAL PROPERTY

From John Smith, Major, Medical Corps, *U. S. Army, at* Base Hospital No. 1, Fort Sam Houston, Texas, *To* The Surgeon, *U. S. Army, at* Fort Clark, Texas.

ARTICLES.	QUANTITY.	ARTICLES.	QUANTITY.
Axe, H. C.	1		

In possession of Private John Jones, Medical Department, transferred to Fort Clark, Texas, June 10, 1917.

Receipt acknowledged

John Jones,
Private, Medical Department.

INVOICED *this* 10th *day of* June, *1917* *and dropped per Voucher No.* 2 [redacted] *1917. Return of Invoicing Officer.*

John Smith,
Major, M.C.
Invoicing Officer.

RECEIVED *this* ..... *day of* ....., *19* *and taken up per Voucher No.* ..... *Qr., F. Y. 19* . *Return of Receiving Officer.*

.....
Receiving Officer.

(Signed in Duplicate

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DR. **CASH ACCOUNT.** CR.

1917				1917			
	Cash on hand from preceding acc't	00	00				
June 20	Sales condemned property	100	00	June 30	Deposited	101	00
June 30	Sales of medicines to civilians	1	00				
					Cash carried forward to next account	00	00
	TOTAL	101	00		TOTAL	101	00

(NOTE.—The cash account must be completed by the disbursing officer. If there were no cash transactions during the period for which the account is rendered, that fact must be stated on the face of the cash account.)

FIRST INDORSEMENT.

Base Hospital No 1, Ft. Sam Houston, Texas. (Place.)

June 30, 1917.

Respectfully forwarded to the Surgeon General, U.S. Army, Washington, D. C., for administrative examination and reference to the Auditor for the War Department.

John Smith, Captain, M.C., U.S.A.

SECOND INDORSEMENT.

WAR DEPARTMENT,

Office of the Auditor for the War Department, WASHINGTON, D. C.

....., 191

Respectfully forwarded to the Auditor for the War Department. This account has received the administrative examination required by law and is approved.

.....

.....

.....

See pa. 660 A.R.
" " 2143 and 5104 A.R.

WAR DEPARTMENT.
(Form No. 560 R. Approved by the Comptroller of the Treasury May 8, 1911.)

WAR DEPARTMENT.

Medical Department
(Bureau or Office.)

Under bond dated 191

John Smith, (Name.) Captain, Med. Corps, (Official designation.) *in account current with*

THE UNITED STATES *from* June 1, *1917*, *to* June 30, *1917*.

	DEBITS.	Miscellaneous Receipts.	Replacing Medical Supplies. Sales to Civilians. F.Y. 1917-18	TOTAL
1	Balance due the U. S. from last account	00 00	00 00	00 00
2	Sales condemned property per abstract	100 00		100 00
3	Sales of medicines per abstract		1 00	1 00
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
	TOTAL	100 00	1 00	101 00
	CREDITS.			
1	Disbursements as shown by abstracts and vouchers herewith			
2	Deposited Lockwood National Bank,			
3	San Antonio, Texas, C.D.No.32	100 00	1 00	101 00
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16	Balance due the U. S.	00 00	0 00	00 00
	TOTAL	100 00	1 00	101 00

I CERTIFY that the above is a full, true, and correct account of all moneys coming into my possession on account of the United States during the period stated.

The balance due the United States of $..... is held as follows:

On deposit—		LESS OUTSTANDING CHECKS	NET BALANCE
With	$.....	$.....	$.....
With	$.....	$.....	$.....
Cash in office safe			$.....
Otherwise kept (manner and authority for so keeping)			$.....
		TOTAL.....	$.....

Station Fort Sam Houston, Texas.

This is to certify that I have counted the cash and verified the net balance, excepting the depositary balance, as stated on this account current.

..... (Name of witness.)

..... (Official designation.)

John Smith, (Name.)

Captain, Medical Corps, (Official designation.)

Google

FORM NO. 322 A

WAR DEPARTMENT

MEDICAL DEPARTMENT, U. S. ARMY

ABSTRACT OF FUNDS RECEIVED

FROM

SALES OF MEDICINES TO CIVILIANS

AMOUNT (NET) $ 1.00

ACCOUNTS OF

John Smith,

Captain, Med. Corps, U. S. ARMY,

AT

Base Hospital No. 1,

Fort Sam Houston, Texas.

FROM June 1, 1917,

TO June 30, 1917.

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WAR DEPARTMENT
FORM NO. 0000 A
APPROVED BY THE COMPTROLLER OF THE TREASURY
OCTOBER 24, 1914

See pa. 680 A.R.
" 243 and 670 Jr. A.U.

WAR DEPARTMENT
MEDICAL DEPARTMENT, U. S. ARMY

ABSTRACT OF FUNDS RECEIVED *by the undersigned, at* Base Hospital No.1, Fort Sam Houston, Texas.
during June, 1917, *on account of Sales of Medicines to Civilians*

NAMES OF PATIENTS	MEDICINE CHARGES, PATIENTS IN HOSPITAL — PERIOD OF HOSPITAL CARE — From—	To—	No. of Days	PRESCRIPTION CHARGES, PATIENTS NOT IN HOSPITAL — R No.	Date when filled	AMOUNT	
Thomas Smith	June 2	June 5	3				75
William Brown				21	June 10/17		25

Form No. 325.

WAR DEPARTMENT

Medical Department

(Bureau or Office.)

Account of Sales of Public Property at Public Auction or on Sealed Proposals.

Amount, $ 100.00

On the 20 *day of* June, *1917*

ACCOUNTS OF

John Smith

Captain, Medical Corps, *U. S. Army,*

AT

Base Hospital, #1
Fort Sam Houston, Texas

From June 1, *191* 7

To June 30, *191* 7

3—3040

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WAR DEPARTMENT
Public Form No. [illegible]
Approved by the Comptroller of the Treasury
April [illegible], 1914.

See Par 680 A.R. 243 and 510 [illegible]

WAR DEPARTMENT.

Medical Department
(Bureau or Office.)

ACCOUNT OF SALES of Public Property at Public Auction or on sealed proposals at Ft. Sam Houston, Texas, *on the* 20th *day of* June, *1917, under the direction of* John Smith, Captain, *U. S. Army.*

PURCHASER.	QUANTITY.	ARTICLES.	AMOUNT.
J. Goldstein	1	Apparatus X-Ray	100 00
		GROSS AMOUNT $	100 00

EXPENSES OF SALE.

Auctioneer's Fees	
Advertising	
Inspection	
Drayage	
TOTAL EXPENSES $	00 00
NET PROCEEDS $	100 00

NET PROCEEDS TO BE CARRIED INTO THE TREASURY TO THE CREDIT OF Miscellaneous Receipts

I CERTIFY that the above Account of Sales is correct: William Jones, Sgt. Medical Department
(Auctioneer.)

I CERTIFY that the above enumerated articles were sold at public auction, or on sealed proposal, as above stated, and to the highest bidder, pursuant to 3rd Ind. Hqs. So. Dept. June 10, 1917, and that the amount received therefrom will be taken up on my Account Current for June, 1917.
(Authority for sale.)

John Smith,
Captain, Med. Corps.

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Form No. 334.

Public Voucher No. .....

WAR DEPARTMENT

.....
(Bureau or Office)

PAY ROLL

APPROPRIATIONS	AMOUNTS	
TOTAL AMOUNT		

ACCOUNTS OF

.....
(Name of disbursing officer)

.....
(Official designation)

.....
(Place where located)

.....
(Period for which voucher is rendered)

3—2351

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WAR DEPARTMENT
Form No. 884.
Approved by the Comptroller of the Treasury April 28, 1914

WAR DE

Medical

PAY

We, the subscribers, severally certify in signing to our respective accounts stated below, that they are correct; and
in Cash, where so noted, the sums set after our respective names, in full payment for

Object Symbol	NO.	NAME (In case of enlisted men give rank)	OCCUPATION	RATE OF PAY		PERIOD OF SERVICE				AMOUNT OF PAY	
				Per Month	Per Day	From— 1917	To— 1917	Months	Days		
	1	Guillandeu, W. B.	Chauffeur Instructor	$125.	---	May 1	May 31	1	--	$125.00	--
	2	Lee, W. B.	Clerk	90.	---	" 1	" 31	1	--	90.00	--
	3	Coon, Earl	Clerk	75.	---	" 1	" 31	1	--	75.00	--
	4	Dickson, Sarah J.	Seamstress	15.	---	" 1	" 31	1	--	15.00	--
	5	Brooks, Francis	Cook	35.	---	" 1	" 31	1	--	35.00	--

DISTRIBUTION

APPROPRIATIONS	SYMBOLS	AMOUNTS	
	TOTAL		

I CERTIFY that the
appointed or detailed; that
that such services, except
pay roll is paid for any per
respective names; that all
covered by this pay roll ex

Approved

Date

Digitized by Google

ARTMENT

Department.

(or Office)

See par 104-107 [illegible]

VOUCHER No.

GENERAL ACCOUNT

DETAIL ACCOUNT

ROLL

we severally acknowledge to have received of _____ (Name.) _____ (Title or designation.)

ur services at Base Hospital No.1, Ft. Sam Houston, for the periods stated.

...s, ...ns, ..."	AMOUNT PAID	NO.	SIGNATURES (Do not sign in duplicate)	Notation of Cash or Check Payment	WITNESS	REMARKS Deductions Explained	U. S. NOTATIONS
	$125.00	1	Guillaudew, W. B.		Cox, James		
	90.00	2	Lee, W. B.		"		
	75.00	3	Coon, Earl		"		
	15.00	4	Dickson, Sarah J.		"		
	35.00	5	Brooks, Francis		"		

Examined by

oregoing pay roll is correct; that it appears from the records of my office that the persons named thereon were legally each has performed the service required by law and the regulations of the War Department during the period mentioned; s otherwise indicated, have been performed under my supervision, and that no person whose name appears in the foregoing od of absence in excess of that allowed by law; that they are severally entitled to the amounts of pay set opposite their details, from my personal supervision, are indicated in the column of "REMARKS;" and that the full period of service ired prior to the actual signing thereof.

R. F. Metcalfe,

Major, Medical Corps.
(Title)

for $[redacted]

191

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WAR DEPARTMENT
Form No. 884.
Approved by the Comptroller of the Treasury April 10, 1914

WAR DEP

Medical

(Bureau

PAY

Object Symbol	NO.	NAME (In case of enlisted men give rank)	OCCUPATION	RATE OF PAY		PERIOD OF SERVICE				AMOUNT OF PAY	Deduct Explanat made "Amou
				Per Month	Per Day	From— 1917	To— 1917	Months	Days		
	1	Guillaudew, W. B.	Chauffeur Instructor	$125.	——	May 1	May 31	1	—	$125.00	—
	2	Lee, W. B.	Clerk	90.	——	" 1	" 31	1	—	90.00	—
	3	Coon, Earl	Clerk	75.	——	" 1	" 31	1	—	75.00	—
	4	Dickson, Sarah J.	Seamstress	15.	——	" 1	" 31	1	—	15.00	—
	5	Brooks, Francis	Cook	35.	——	" 1	" 31	1	—	35.00	—

DISTRIBUTION

APPROPRIATIONS	SYMBOLS	AMOUNTS	
TOTAL			

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PARTMENT
Department.
or Office)

ROLL

VOUCHER No. .....
GENERAL ACCOUNT .....
DETAIL ACCOUNT .....

Base Hospital No.1, Ft. Sam Houston,

AMOUNT PAID	NO.		Notation of Cash or Check Payment	WITNESS	REMARKS Deductions Explained	U. S. NOTATIONS
$125.00	1					
90.00	2					
75.00	3					
15.00	4					
35.00	5					

Examined by

MEMORANDUM VOUCHER
(To be filled in and retained by paying officer)

Voucher certified by .....

Voucher approved by .....

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Form No. 330 a.

Public Voucher No. .....

WAR DEPARTMENT

.....
(Bureau or Office.)

APPROPRIATION:

.....
(State full title of appropriation.)

.....

Amount, $.....

IN FAVOR OF

.....
(Name of payee.)

FOR PURCHASES AND SERVICES OTHER THAN PERSONAL.

ACCOUNTS OF

.....
(Name of disbursing officer.)

.....
(Official designation.)

.....
(Place where located.)

....., *191*
(Period for which voucher is rendered.)

p—0038

METHOD OF INVITING PROPOSALS.

(Sec. 3709 of the R. S. and act of June 12, 1906.)

1. Advertising in newspapers.

2. Circular letters sent to dealers, and notices posted in public places.

3. Without advertising, under an exigency of the service which existed prior to the order and which would not admit of the delay incident to advertising.

4. Without advertising, under the act of June 12, 1906, the aggregate amount involved not exceeding $500

5. Without advertising, it being impracticable to secure competition because of * .....

.....

.....

.....

6. Without advertising, that method being most economical and advantageous to the Government. (Applicable to R. and H. and Fort'n. Appropriations only, acts of August 11, 1888, and June 25, 1906.)

7. (For Ordnance Department only.) Without advertising, under the act of May 11, 1906, it being injurious to the interests of the public service to publicly divulge the character of the articles purchased.

FORM OF AGREEMENT.

(Sec. 3744 of the R. S.)

A. Formal contract dated ..... , 191

B. Written proposal and acceptance filed.....

..... and upon
(If with this voucher, so state; if not, indicate where.)
immediate delivery or performance.

C. Less formal agreement .....
(State character.)
..... and upon
immediate delivery or performance.

INSTRUCTIONS UNDER SECTION 5 ABOVE.

* Among the reasons which may be assigned as making competition impracticable are the following:

(a) Under a formal contract for construction there arises a necessity for additional work practicable of performance only by the contractor.

(b) The articles wanted are patented or copyrighted and not on sale by dealers, but by the owners of the patent or copyright, or their agents or assigns alone, at a fixed and uniform price.

(c) There is only one dealer within a practicable distance from whom the articles can be obtained.

(d) Prices or rates are fixed by legislation, either Federal, State, or municipal; or by competent regulation.

(e) Previous advertising for the identical purchase has been followed by the receipt of no proposals, or only of such as were unreasonable, and under circumstances indicating that further advertising would not alter results.

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WAR DEPARTMENT
Public Form No. 336.
Approved by the Comptroller of the Treasury April 29, 1914.

Pa. 476. Mu 1a. 9.

WAR DEPARTMENT
Medical Department, Fort Sam Houston, Texas
(Bureau or Office.)

Voucher No. .....
General Account .....
Detail Account .....

PUBLIC VOUCHER

PURCHASES AND SERVICES OTHER THAN PERSONAL

APPROPRIATION: ..... Symbol..... $.....
APPROPRIATION: ..... Symbol..... $.....
APPROPRIATION: ..... Symbol..... $.....

THE UNITED STATES,

To Paul Mueller ..... DR.

ADDRESS: #104 West Commerce St., San Antonio, Texas

OBJECT SYMBOL	DATE OF DELIVERY OR SERVICE 191 7	ARTICLE OR SERVICE	QUANTITY	UNIT	UNIT PRICE	AMOUNT	U. S. NOTATIONS
	May 1 to May 31	Sharpening surgical instruments property of the Medical Dept. (18 instruments) For use at Base Hospital, Fort Sam Houston, Texas. Auth:- 2nd Ind.#13242-25, W.D., S.G.O., June 26, 1916.	18	INS.	.30	5 40	
					TOTAL	$5 40	

(Account to be completely filled in by payee, or before signature by payee, without alteration or erasure of any kind.)

*I CERTIFY that the above account is correct, and that payment therefor has not been received.

Paul Mueller

(DO NOT SIGN IN DUPLICATE.)

EXAMINED BY

(Any notations made in spaces provided therefor on the reverse of this voucher become a part of this certificate.)

I CERTIFY that the above articles have been received by me in good condition, and in the quality and quantity above specified, or the services performed as stated, and they are in accordance with orders therefor; that the prices charged are reasonable, and in accordance with the agreement, or that they were secured in accordance with No. ...1... of the method of advertising and under the form of agreement lettered ...C... as shown on the reverse hereof.

Approved for $.....

R. F. METCALF,
Major, Medical Corps, Surgeon.

Date, ...

Paid by check No. ....., dated ....., 191 , of .....
on ....., in favor of payee named above, for $.....

OR

Received ..... (Date.), of ....., in CASH, the sum of
..... dollars and ..... cents, in full payment of the above account.

[redacted]

*When a voucher is certified in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "Chicago Edison Company, per John Smith, Secretary," or Treasurer, as the case may be.

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WAR DEPARTMENT
Public Forms No. 336.
Approved by the Comptroller of the Treasury April 20, 1914.

WAR DEPARTMENT
Medical Department, Fort Sam Houston, Texas
(Bureau or Office.)

Voucher No. _____
General Account _____
Detail Account _____

PUBLIC VOUCHER

PURCHASES AND SERVICES OTHER THAN PERSONAL

APPROPRIATION: _____ Symbol _____ $ _____
APPROPRIATION: _____ Symbol _____ $ _____
APPROPRIATION: _____ Symbol _____ $ _____

THE UNITED STATES,
To Paul Mueller DR.,
ADDRESS: #104 West Comerce St., San Antonio, Texas

OBJECT SYMBOL	DATE OF DELIVERY OR SERVICE 191 7	ARTICLE OR SERVICE	QUANTITY	UNIT	UNIT PRICE	AMOUNT	U. S. NOTATIONS
	May 1	Sharpening surgical instruments					
		to property of the Medical Dept.					
	May 31	(18 instruments)	18	INS.	.30	5 40	
		For use at Base Hospital,					
		Fort Sam Houston, Texas.					
		Auth:- 2nd Ind.#13242-25,					
		W.D., S.G.O., June 26, 1916.					
					TOTAL	5 40	

EXAMINED BY

MEMORANDUM VOUCHER

(To be filled in and retained by paying officer.)

Voucher certified by _____

Voucher approved by _____

Paid by check No. _____, dated _____, 191 , of _____
on _____, in favor of payee named above, for $ _____

OR

Paid in cash _____, by _____
(Date.)
_____ dollars and _____ cents.

Funds derived from check No. _____ on _____

$ _____

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Par 476 Regs. 40.

WAR DEPARTMENT
Public Form No. 336.
Approved by the Comptroller of the Treasury April 25, 1914.

WAR DEPARTMENT
Medical Department, Fort Sam Houston, Texas
(Bureau or Office.)

Voucher No. .....
General Account .....
Detail Account .....

PUBLIC VOUCHER

PURCHASES AND SERVICES OTHER THAN PERSONAL

APPROPRIATION: ..... Symbol..... $.....
APPROPRIATION: ..... Symbol..... $.....
APPROPRIATION: ..... Symbol..... $.....

THE UNITED STATES,

To Noa Spears Company, DR.,

ADDRESS: #127 Losoya St., San Antonio, Texas

OBJECT SYMBOL	DATE OF DELIVERY OR SERVICE 191 7		ARTICLE OR SERVICE	QUANTITY	UNIT	UNIT PRICE	AMOUNT	U. S. NOTATIONS
	May	5	Nosepieces for somnoform					
			inhaler,	2	No.	1 50	3 00	
	"	10	Glass Ys for Murphy Drip,	8	"	10	80	
	"	20	Gas,oxygen,300-gallon,	2	Cyls	8 75	17 50	
			Gas,Nitrous-oxide,1280-gal.	3	"	24 32	72 96	
			For use at Base Hospital,					
			Fort Sam Houston, Texas.					
			Auth:- 2nd Ind.,#13242-25,					
			W.D., S.G.O., June 26, 1916.					
						TOTAL	$94 26	

(Account to be completely filled in by payee, or before signature by payee, without alteration or erasure of any kind.)

EXAMINED BY

*I CERTIFY that the above account is correct, and that payment therefor has not been received.

(DO NOT SIGN IN DUPLICATE.)

Noa Spears Company,
Per A.M.Williams, Sect.

(Any notations made in spaces provided therefor on the reverse of this voucher become a part of this certificate.)

I CERTIFY that the above articles have been received by me in good condition, and in the quality and quantity above specified, or the services performed as stated, and they are in accordance with orders therefor; that the prices charged are reasonable, and in accordance with the agreement, or that they were secured in accordance with No. 4 of the method of advertising and under the form of agreement lettered C as shown on the reverse hereof.

Approved for $.....

R.P.METCALF,
Major, Medical Corps, Surgeon.

Date, ...

Paid by check No. ....., dated ....., 191 , of .....
on ....., in favor of payee named above, for $.....

OR

Received ..... (Date.), of ....., in CASH, the sum of
..... dollars and ..... cents, in full payment of the above account.

$[redacted]

* When a voucher is certified in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "Chicago Edison Company, per John Smith, Secretary," or Treasurer, as the case may be

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WAR DEPARTMENT
Public Form No. 220.
Approved by the Comptroller of the Treasury April 29, 1914.

WAR DEPARTMENT
Medical Department, Fort Sam Houston, Texas
(Bureau or Office.)

Voucher No. .....
General Account .....
Detail Account .....

PUBLIC VOUCHER

PURCHASES AND SERVICES OTHER THAN PERSONAL

APPROPRIATION: ..... Symbol..... $.....
APPROPRIATION: ..... Symbol..... $.....
APPROPRIATION: ..... Symbol..... $.....

THE UNITED STATES,

To Noe Spears Company ..... DR.

ADDRESS: #127 Losoya St., San Antonio, Texas

OBJECT SYMBOL	DATE OF DELIVERY OR SERVICE 191 7	ARTICLE OR SERVICE	QUANTITY	UNIT	UNIT PRICE	AMOUNT	U. S. NOTATIONS
	May 5	Mosepieces for somnoform					
		inhaler,	2	No.	1 50	3 00	
	" 10	Glass Ys for Murphy Drip,	8	"	10	80	
	" 20	Gas,oxygen,350-gallon,	2	Cyls	8 75	17 50	
		Gas,Nitrous-oxide,1280-gal.	3	"	24 32	72 96	
		For use at Base Hospital,					
		Fort Sam Houston, Texas.					
		Auths- 2nd Ind.,#13242-25,					
		W.D., S.G.O., June 26, 1916.					
					TOTAL	94 26	

EXAMINED BY

MEMORANDUM VOUCHER

(To be filled in and retained by paying officer.)

Voucher certified by .....

Voucher approved by .....

Paid by check No. ....., dated ....., 191 , of .....
on....., in favor of payee named above, for $.....

OR

Paid in cash ....., by .....
(Date.)
..... dollars and ..... cents.

Funds derived from check No. ..... on .....

$.....

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See Dr 270-278- Mg. Mss Bd.

WAR DEPARTMENT
Public Form No. 336.
Approved by the Comptroller of the Treasury April 29, 1914.

WAR DEPARTMENT
Medical Department, Fort Sam Houston, Texas
(Bureau or Office.)

Voucher No. .....
General Account .....
Detail Account .....

PUBLIC VOUCHER

PURCHASES AND SERVICES OTHER THAN PERSONAL

APPROPRIATION: ..... Symbol..... $.....
APPROPRIATION: ..... Symbol..... $.....
APPROPRIATION: ..... Symbol..... $.....

THE UNITED STATES,

To The Post Laundry, DR.,

ADDRESS: Fort Sam Houston, Texas

OBJECT SYMBOL	DATE OF DELIVERY OR SERVICE 191 7	ARTICLE OR SERVICE	QUANTITY	UNIT	UNIT PRICE per 100	AMOUNT	U. S. NOTATIONS
	May 1	Hospital Laundry,					
	to	Fort Sam Houston, Texas.					
	May 31	Viz:-Hosp.Linen,					
		(property of the M.D.)	79599	pcs.	1 75	1392 98½	
		White suits of enlisted					
		men (their own property)	223	pcs.	1 75	3 90½	
		Nurses Uniforms,					
		(their own property)	4498	pcs.	1 75	78 71½	
		Auth:- 1st Ind., D.S.O.,					
		So.Dept.,July 28, 1916.					
					TOTAL	$1475 60	

(Account to be completely filled in by payee, or before signature by payee, without alteration or erasure of any kind.)

EXAMINED BY

* I CERTIFY that the above account is correct, and that payment therefor has not been received.

The Post Laundry,

(DO NOT SIGN IN DUPLICATE.)

Chas. Abel, Capt. Q.M.C., In Charge.

(Any notations made in spaces provided therefor on the reverse of this voucher become a part of this certificate.)

I CERTIFY that the above articles have been received by me in good condition, and in the quality and quantity above specified, or the services performed as stated, and they are in accordance with orders therefor; that the prices charged are reasonable, and in accordance with the agreement, or that they were secured in accordance with No. 2 of the method of advertising and under the form of agreement lettered C as shown on the reverse hereof. No articles are charged for on the foregoing account except such as are constituted a part of the hosp.laundry by par.267 (a) MMD., No matron at post.

Approved for $.....

R.F.METCALF.
Major, Medical Corps, Surgeon.

Date, ...

Paid by check No. ....., dated ....., 191 , of .....
on ....., in favor of payee named above, for $.....

OR

Received ..... (Date.), of ....., in CASH, the sum of ..... dollars and ..... cents, in full payment of the above account.

[redacted]

* When a voucher is certified in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "Chicago Edison Company, per John Smith, Secretary," or Treasurer, as the case may be.

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WAR DEPARTMENT
Public Form No. 330.
Approved by the Comptroller of the Treasury April 20, 1914.

WAR DEPARTMENT
Medical Department, Fort Sam Houston, Texas
(Bureau or Office.)

Voucher No. .....
General Account ... .
Detail Account..... .....

PUBLIC VOUCHER

PURCHASES AND SERVICES OTHER THAN PERSONAL

APPROPRIATION: ..... Symbol..... $.....
APPROPRIATION: ..... Symbol..... $.....
APPROPRIATION: ..... Symbol..... $.....

THE UNITED STATES,

To The Post Laundry, DR.,

ADDRESS: Fort Sam Houston, Texas

OBJECT SYMBOL	DATE OF DELIVERY OR SERVICE 191 7		ARTICLE OR SERVICE	QUANTITY	UNIT	UNIT PRICE per 100	AMOUNT	U. S. NOTATIONS
	May	1	Hospital Laundry,					
		to	Fort Sam Houston, Texas.					
	May	31	Viz:-Hosp.Linen,					
			(property of the U.S.)	79599	pcs.	1 75	1392 98½	
			White suits of enlisted					
			men (their own property)	223	pcs.	1 75	3 90½	
			Nurses Uniforms,					
			(their own property)	4498	pcs.	1 75	78 71½	
			Auth:- 1st Ind., D.S.O.,					
			So.Dept.,July 28, 1916.					
						TOTAL	$1475 60	

EXAMINED BY

MEMORANDUM VOUCHER

(To be filled in and retained by paying officer.)

Voucher certified by .....

Voucher approved by .....

Paid by check No. ....., dated ....., 191 , of .....
on ....., in favor of payee named above, for $.....

OR

Paid in cash ..... (Date.), by .....
..... dollars and ..... cents.

Funds derived from check No. ..... on .....

$[redacted]

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Par 277 U. M. D.

WAR DEPARTMENT
Public Form No. 336 a.
Approved by the Comptroller of the Treasury April 30, 1914.

WAR DEPARTMENT
Medical Department.
(Bureau or Office.)

Voucher No. .....
General Account .....
Detail Account .....

PUBLIC VOUCHER

PURCHASES AND SERVICES OTHER THAN PERSONAL

APPROPRIATION: ..... Symbol..... $.....
APPROPRIATION: ..... Symbol..... $.....
APPROPRIATION: ..... Symbol..... $.....

THE UNITED STATES.

To Sanitary Laundry Lmtd., DR.,

ADDRESS: Chicago, Ill.

OBJECT SYMBOL	DATE OF DELIVERY OR SERVICE 1917.	ARTICLE OR SERVICE	QUANTITY	UNIT	UNIT PRICE	AMOUNT	U. S. NOTATIONS
	Jan 1	Hospital laundry at Camp					
	to	Hospital, ---------, Ill.					
	Jan 31	Hospital linen (property of the Medical Department).					
		Blankets	20	pcs.	15	3 00	
		Pajama coats	100	pcs.	05	5 00	
		Pajama trousers	120	pcs.	05	6 00	
		Pillow cases, sheets and towels.	1000	pcs.	01	10 00	
		Patients' clothing (their own property).					
		Undershirts	100	pcs.	05	5 00	
		Underdrawers	100	pcs.	05	5 00	
		Author:- 1st Ind. D.S.O. C.Dept. Dec.17,1916.					
					TOTAL	34 00	

(Account to be completely filled in by payee, or before signature by payee, without alteration or erasure at any time.)

EXAMINED BY

*I CERTIFY that the above account is correct, and that payment therefor has not been received.

(DO NOT SIGN IN DUPLICATE.)

Sanitary Laundry Lmtd.
per John Smith, Cashier.

(Any notations made in spaces provided therefor on the reverse of this voucher become a part of this certificate.)

I CERTIFY that the above articles have been received by me in good condition, and in the quality and quantity above specified, or the services performed as stated, and they are in accordance with orders therefor; that the prices charged are reasonable, and in accordance with the agreement, or that they were secured in accordance with No. 4 of the method of advertising and under the form of agreement lettered C... as shown on the reverse hereof. No articles are charged for in the foregoing account except such as

Approved for $..... are constituted a part of the hospital laundry by par. 267 M.D.

No matron at post.

James S. Smith
Capt. Med. Corps, U.S.A.

Date. .....

Paid by check No. ....., dated ....., 191 , of .....

on....., in favor of payee named above, for $.....

OR

Received ..... (Date.) of ....., in CASH, the sum of ..... dollars and ..... cents, in full payment of the above account.

[redacted]

*When a voucher is certified in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "Chicago Edison Company, per John Smith, Secretary," or "Treasurer," as the case may be.

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REPORT SHEET—REPORT OF SICK AND WOUNDED AT

Camp Hospital,Leon Springs,Texas.

(Here state the name of the hospital, infirmary or Medical Department organization, and give its location on the last day covered by the report.)

MONTH OF April 12th to 30th 1917

(Give beginning and end of period, if less than a month.)

COMMAND:

(Here specify the command and the companies and detachments composing it on the last day covered by the report, together with the brigade, tactical division and field army, or territorial department, of which it forms a part.)

Det's M.D.,Q.M.C.,S.C.,O.D..
Hq.,Supply,M.G.,"A"B"C"D"E"F"G"H"I"K"L"M" Companies 4th Infantry.
Hq.,M.G.,A"B"C"E"F"G"Troops 3rd Cavalry.
Bn.Hq.,"E"F"G"H" 3rd F.a.
Hq.,Supply,M.G.,"A"B"C"D"E"F"G"H"I"K"L"M" Companies 19th Infantry.

1st Provisional Infantry Division. Southern Department.

(State important variations from the general composition of the command, as the arrival or departure of companies, giving the dates thereof respectively, and the names of accompanying medical officers. Reports relating to commands in the field should show the location of the principal camps occupied during the month, with the dates of arrival at and departure from each. When a hospital is opened or closed, or a Medical Department organization discontinued, during the period of the report, the fact and date thereof should be recorded and the orders directing it be cited.)

Hospital opened April 12th,1917,per G.O.128,H.S.D.,April 10,1917.
Entire Regiment 19th Infantry,arrived by marching(from Ft.Sam Houston,Texas) April 15, 1917.John Doe,Major M.C.,Frank Doe,1st Lt.MRC,accompanying.
Troops "D"H" 3rd Cavalry left for Austin,Texas,April 29,1917.No Medical Officers accompanying.

Mean strength of command, for 19 days.

Officers			300	
Enlisted men	American troops	White	5000	
		Colored	500	
	Filipino		2	
	Porto Rican		1	
				Total 5803
Indian Scouts			20	20

NUMERICAL REPORT FOR THE MONTH

	Remaining from last month.	ADMISSIONS. From command.	From Other sources. By transfer.	From Other sources. Otherwise.	Total to be accounted for.	COMPLETED CASES. Returned to duty.	Died.	Discharged for disability.	Deserted.	Discharged by expiration of term.	Transferred to insane asylum.	Transferred to other hospital.	Otherwise disposed of.	REMAINING. Hos.	REMAINING. Qrs.	AGGREGATE No. OF DAYS LOST FROM SICKNESS. In hospital.	AGGREGATE No. OF DAYS LOST FROM SICKNESS. In quarters.
Officers and soldiers on the active lists of the Army[1]		8	2	2	12	4	1	1 1				1 1		3		58	4
Retired officers and soldiers under assignment to active duty[1]																	
All others[1]		2			2	1							1			6	Not used.

[1] Cases, including deaths, which are carded for record only, among those who are not currently on the register of patients, will be tabulated above the line in the proper space under completed cases.

[1] "All others," which comprises those on the status of civilians (see Instruction 3 on reverse) will be reported in this summary *only* when they receive hospital treatment or die.

I CERTIFY that this sheet and the accompanying list and cards are a true and correct exhibit of the sick and wounded of the command specified above for the period indicated. Cards of eleven (11) completed cases accompany this sheet.

John Doe.

Major Medical Corps., U. S. Army,
Surgeon.

5—608

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REMARKS:

TYPHOID PROPHYLAXIS.

	Completed.	Uncompleted.
Co. "A" 4th. Infantry	2	1
Co. "C" 19th. Infantry	0	5
Totals.	2	6

FORM 51.
MEDICAL DEPARTMENT, U. S. ARMY
(Revised Feb. 18, 1916)

INSTRUCTIONS

1. The Report of Sick and Wounded comprises the report sheet, Form 51, the nominal check list, Forms 51a and 51b, and the report cards, Form 52.

2. The mean strength of the command for the period covered by the report will be computed as follows: The totals of strength for each day of the period noted by the adjutant upon the surgeon's morning reports of sick will be added together by heads or items (officers, white enlisted men, colored enlisted men, etc., separately) and divided by the number of days constituting the period. The quotients are the mean strength by items, and their sum is the total mean strength.

(a) The foregoing is the rule for commands which are intact. When, however, a part of the command is on field or detached service accompanied by a medical officer, who will himself conformably to regulations render a report of sick and wounded, appropriate deduction should be made in computing the strength at the main or permanent station. Conversely, when the sick and injured among troops, not accompanied by a medical officer, which are in the vicinity of the command, but are not properly a part of it, are habitually admitted to its hospital or infirmary, or taken up on its register, appropriate addition to the strength of command should be made.

(b) The mean strength of Medical Department organizations, such as general hospitals, base hospitals, evacuation hospitals, field hospitals, hospital trains and hospital ships, will include the personnel of such organizations only; it will not include the sick and wounded therewith who were admitted by transfer (except sick and wounded personnel readmitted by transfer), or the strength of the commands from which such transferred cases came or to which they belong.

3. The number of civilians with the command will be indicated in the diagram on the third fold of this sheet, together with the number of cases of disease and injury among them. Officers and enlisted men on the retired lists, who are not under assignment to active duty, ex-officers, ex-soldiers, applicants for enlistment who have not been sworn in, and members of the organized militia not mustered into the service of the United States, all have the status of civilians for the purpose of this tabulation while with army commands.

4. The record of birth will give the date of birth, the sex and name of the child, the name, rank, etc., of the father, or if a civilian his occupation, the maiden name of the mother, and whether the child is the first or second, etc., of the marriage. The record of marriage will give the date of the marriage, the name, age, birthplace, and rank, etc., or occupation of the groom, and the name, age, and birthplace of the bride. The record of death will show the date of the death, the name, sex, and age of the deceased, and the cause of death.

5. The report card will be a full and exact transcript of its register card as the latter stands on the last day covered by the report, except in spaces 19, 20, and 26. Space 19 will be filled out in every case. Space 20 will be filled out on report cards from mobile or field commands as follows: After the word "from" will be noted the location of the hospital or organization on the last day covered by the report, if it is different from the location given in space 18; if, however, the location on the last day is the same as that given in space 18, then the word "same" will be entered in space 20. Space 20 need not be filled out on the report cards from a hospital which is permanently located in one place. Space 26 on the report card of a case brought forward from the preceding year will include the days of treatment in that case during the current year only. The upper and lower margins on the front of the card, and the upper margin on the back, should be left blank.

6. Entries on the report sheet, nominal lists, and report cards should be made with the typewriter, when possible. They should be plainly and carefully written using permanent black ink.

7. For mailing: With back of sheet up, fold forward from bottom to top, and again forward in like manner, thus producing four folds with the designation of the hospital, etc., and month, on the outside.

3—3645

CIVILIAN POPULATION WITH THE COMMAND

(See Instruction 3.)

NUMBER OF—	MEN.	WOMEN.	CHILDREN.	TOTAL.
Persons (averaged for the month)	25	0	0	25
Cases of disease	5	0	0	5
Cases of injury	3	0	0	3
Total Cases	8	0	0	8

BIRTHS, MARRIAGES, AND DEATHS

(See Instruction 4.)

None.

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Form 51 a.
Medical Department, U. S. Army
(Revised Oct. 17, 1916.)

Page 1

Nominal Check List for Report of Sick and Wounded at

Camp Hospital, Leon Springs, Texas.

For April, *1917*.

INSTRUCTIONS.—The list for January in each year will give in sequence of register numbers the names, etc., of all patients, military or civilian, remaining from the previous year, and of all registered during the month. The list for any subsequent month will give in like sequence the names, etc., of patients registered during the month, omitting the names of those remaining from the previous month. The column "Month Completed" will not be filled in at post on the list forwarded; but entry therein should be made on the retained list as cases are completed. In the case of civilian patients the word "Civilian" will be entered across the columns "Rank," "Co.," "Organization." A duplicate of the list will be retained with the medical records of the post or command.

Register No.	Month Completed	Name		Rank	Co.	Organization
		Surname	Christian Name			
1.		Jenkins	Isaac	Pvt.	L	4th. Infantry
2.		Johnson	Edward	Pvt.	B	7th. F.A.
3.		Vann	Robert G.	Pvt.	C	3rd. Cav.
4.		Jordan	Ernest A.	Mech.	M.G.	3rd. Cav.
5.		Jones	Albert M.	Sgt.	FH&S	Medical Department
6.		Smith	Robert V.	Pvt.	I	3rd. F.A.
7.		Bivins	Beacher	Pvt.	K	19th. Infantry
8.		Murphy	Patrick J.	Civilian (Q.M.C.)		
9.		Smith	George E.	Gen. Pris.(Form.Pvt.Co."E" 17th.Inf.)		
10.		Woodard	Emerson G.	Sgt.	B.	12th. Cav.
11.		Roach	Selby M.	Pvt.	Hq.	12th. Infantry
12.		Kirby	William J.	Corp.	F	3rd. Cav.
13.		Taylor	William J.	Corp.	D	3rd. F.A.
14.		Jordan	Ernest A.	Mech.	M.G.	3rd. Cav.
15.		Smith	John F.	Pvt.	A	19th. Infantry.
			JOHN DOE			
			Major, Med. Corps.			

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Form 51 c—Sheet 1.
Medical Department, U. S. Army.
Authorized Sept. 15, 1908.

Page 1.

Nominal Check List of all entries on the Register Cards of patients at .....

Camp Hospital, Leon Springs, Texas., *Month of* April, *1907*

This list should be forwarded with the Report of Sick and Wounded each month. The month of January should include the "Remaining" from previous year. Register numbers should be arranged in their numerical sequence. The column "Month Completed" will be filled in the Office of the Surgeon General by use of the Report Cards and the retained copy by the Register Cards as the cases become completed.

3—1098

Register No.	Month Completed.	Name. Surname	Name. Christian Name.	Rank.	Co.	Organization.
1.		Jenkins	Isaac	Pvt.	L	4th Infantry
2.		Johnson	Edward	Pvt.	B	7th F.A.
3.		Vann	Robert G.	Pvt.	C	3rd Cavalry
4.		Jordan	Ernest A.	Mech.	M.G.	3rd Cavalry
5.		Jones	Albert M.	Sgt.	FH #6	Medical Department.
6.		Smith	Robert V.	Pvt.	I	3rd F.A.
7.		Bivins	Beachef	Pvt.	K	19th Infantry
8.		Murphy	Patrick J.	Civilian (Q.M.C.)		
9.		Smith	George E.	Gen.Prig.(Form.Pvt.Co."E",17th Inf.)		
10.		Woodard	Emerson G.	Sgt.	B	12th Cavalry
11.		Roach	Selby M.	Pvt.	Hq.	12th Infantry
12.		Kirby	William J.	Cpl.	F	3rd Cavalry
13.		Taylor	William J.	Cpl.	D	3rd F.A.
14.		Jordan	Ernest A.	Mech.	M.G.	3rd Cavalry.
			John Doe. Major M.C.			

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(1) SURNAME: Woodard
(2) CHRISTIAN NAME: Emerson G.

(3) RANK	(4) COMPANY	(5) REGIMENT OR STAFF CORPS
Sgt.	B	12th Cavalry

(6) AGE, YRS.	(7) RACE	(8) NATIVITY	(9) SERVICE, YRS.
30	W	Ill.	5-8/12

(10) REGISTER NO. 10-

(11) DATE OF ADMISSION. April 26 .1917

(12) SOURCE OF ADMISSION. Det.12th Cav.,en-route fr.Austin,Tex. to San (a)

(13) CAUSE OF ADMISSION.

Syphilis,secondary,manifested by general adenopathy,rheumatic pains, and history of sore on penis with a double plus Wassermann reaction at Ft.Logan,Cal.,in 1912.Present Wassermann double plus.

(14) IN LINE OF DUTY? No.

(15) COMPLICATION, SEQ., ETC.

(16) DISPOSITION. Tr.to B.H.No.1,Ft.Sam Houston,Texas.

(17) DATE OF DISPOSITION. April 26 .1917

(18) NAME OF HOSPITAL, ETC.

Camp Hospital,
Leon Springs,Texas.

(19) SENT WITH REPORT OF S. & W. FOR MONTH OF Apr. 17

(20) FROM Same.

(21)

W.J.S.
Major M.C. U. S. ARMY.

NO. (22) OF DISPOSITION } CLASSIFICATION { NO. (23) OF ADMISSION

(24) SUB NO.____ (25) SUB NO.____

FORM 52
MEDICAL DEPT U. S. ARMY.
(REVISED OCT. 17, 1910).

63—3623

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(26) DAYS OF TREATMENT IN CURRENT CASE, CURRENT YEAR

YEAR, 19 17	IN QUARTERS	IN HOSPITAL
January		
February		
March		
April		
May		
June		
July		
August		
September		
October		
November		
December		
Total		

63—3623

(a) Antonio,Tex.,unaccompanied by a Medical Officer. Carded for trans.only.On full duty W.W.comd.

Digitized by Google

(1) SURNAME: Jenkins
(2) CHRISTIAN NAME: Isaac

(3) RANK	(4) COMPANY	(5) REGIMENT OR STAFF CORPS
Pvt.	L	4th Infantry

(6) AGE, YRS.	(7) RACE	(8) NATIVITY	(9) SERVICE, YRS.
21	W	Okla.	7/12

(10) REGISTER NO. 1-

(11) DATE OF ADMISSION. April 12 ,19 17

(12) SOURCE OF ADMISSION.
Command. Carded for record only(a)

(13) CAUSE OF ADMISSION.
1. Tuberculosis,chronic,involving upper lobes,both lungs.
2. Syphilis,secondary,manifested by double plus Wassermann.(New)
3. Gonorrheal urethritis,chronic. (New)
All existed prior to enlistment.

(14) IN LINE OF DUTY? 1 No.2 No.3 No.

(15) COMPLICATION, SEQ., ETC.

(16) DISPOSITION. Discharged S.C.D.on account of (see space 13).Degree of disability:One sixteenth (1/16)

(17) DATE OF DISPOSITION. April 12 ,19 17

(18) NAME OF HOSPITAL, ETC.,
Camp Hospital,
Leon Springs,Texas.

(19) SENT WITH REPORT OF S. & W. FOR MONTH OF Apr. 19 17

(20) FROM Same

(21)
W.J.S.
Major M.C. U. S. ARMY.

NO. (22) OF DISPOSITION } CLASSIFICATION { NO. (23) OF ADMISSION

(24) SUB NO.....

FORM 52
MEDICAL DEP'T U. S. ARMY.
(REVISED OCT. 17, 1918).

(25) SUB NO.....

43—3023

[SPACE ABOVE THIS LINE TO BE LEFT BLANK]

(26) DAYS OF TREATMENT IN CURRENT CASE, CURRENT YEAR

YEAR, 19 17	IN QUARTERS	IN HOSPITAL
January		
February		
March		
April		
May		
June		
July		
August		
September		
October		
November		
December		
Total		

43—3023

(a) Not currently on the register.

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(1) SURNAME: Johnson (2) CHRISTIAN NAME: Edward

(3) RANK	(4) COMPANY	(5) REGIMENT OR STAFF CORPS
Pvt.	B	7th F.A.

(6) AGE, YRS.	(7) RACE	(8) NATIVITY	(9) SERVICE, YRS.
18	W	W.Va.	1-2/12

(10) REGISTER NO. 2.

(11) DATE OF ADMISSION. April 13 1917.

(12) SOURCE OF ADMISSION. Tr.fr.R.I.7th F.A., Leon Springs,Tex.No T.C.received.

(13) CAUSE OF ADMISSION.

Traumatism by firearms.Gunshot wound severe,right arm and chest.
Entrance:-Outer aspect,middle third right arm,perforating biceps muscle.
Exit:-directly opposite.Bullet then entering right chest in about median line,just below 7th rib,perforating Hosp. (a)

(14) IN LINE OF DUTY? Yes

(15) COMPLICATION, SEQ., ETC.,

April 13,1917.
Laparotomy,holes in stomach sutured.Ether.

(16) DISPOSITION. Died.Cause of death:-
General peritonitis,acute,following perforation of stomach.Determining:

(17) DATE OF DISPOSITION. April 14,1917. (b)

(18) NAME OF HOSPITAL, ETC.,
Camp Hospital,
Leon Springs,Texas.

(19) SENT WITH REPORT OF S. & W. FOR MONTH OF Apr. 1917

(20) FROM Same.

(21) W.J.S.
Major M.C. U. S. ARMY.

NO. (22) OF DISPOSITION } CLASSIFICATION { NO. (23) OF ADMISSION

(24) SUB NO.....

FORM 52
MEDICAL DEP'T U. S. ARMY.
(REVISED OCT. 17, 1910).

(25) SUB NO.....

62—2633

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(26) DAYS OF TREATMENT IN CURRENT CASE, CURRENT YEAR

YEAR, 19 17	IN QUARTERS	IN HOSPITAL
January		
February		
March		
April		2
May		
June		
July		
August		
September		
October		
November		
December		
Total		2

62—2633

(a) liver,pyloric end of stomach, and lodging beneath the skin, slightly to left of lumbar spine. No bone injury.Accidentally incurred when soldier was in his tent and a comrade,who had been on Guard,entering in the act of unloading his gun,a 38 cal.Army pistol,when same discharged,bullet penetrating soldiers body,at Leon Springs Texas,April 13,1917.

(b) Shock,severe,due to gunshot wound,as shown in space # 13. Death originated in the service and in line of duty.No autopsy.

Digitized by Google

(1) SURNAME: Bivins
(2) CHRISTIAN NAME: Beacher
(3) RANK: Pvt.
(4) COMPANY: K
(5) REGIMENT OR STAFF CORPS: 19th Infantry
(6) AGE, YRS.: 19
(7) RACE: W
(8) NATIVITY: Ala.
(9) SERVICE, YRS.: 7/12
(10) REGISTER NO. 7-
(11) DATE OF ADMISSION: April 23 1917
(12) SOURCE OF ADMISSION: Command.
(13) CAUSE OF ADMISSION: Pneumonia,lobar,acute,lower lobe, right.

Hosp.
(14) IN LINE OF DUTY? Yes
(15) COMPLICATION, SEQ., ETC.:

April 28,1917.
Empyema,acute,right pleural cavity. In line of duty.
April 29,1917.
Operation:-Removal of portion right sixth rib and drainage.Ether.

(16) DISPOSITION: Tr. to A.& N.G.H.,Hot Springs,Ark.,per tel.instr.HSD 4/29/17.
(17) DATE OF DISPOSITION: April 30 1917
(18) NAME OF HOSPITAL, ETC.: Camp Hospital, Leon Springs,Texas.
(19) SENT WITH REPORT OF S. & W. FOR MONTH OF Apr. 1917
(20) FROM Same.
(21) W.J.S.
Major M.C. U. S. ARMY.

NO. (22) OF DISPOSITION } CLASSIFICATION { NO. (23) OF ADMISSION
(24) SUB NO.____ (25) SUB NO.____

FORM 52
MEDICAL DEP'T U. S. ARMY.
(REVISED OCT. 17, 1910).
3—3623

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(26) DAYS OF TREATMENT IN CURRENT CASE, CURRENT YEAR

YEAR, 1917	IN QUARTERS	IN HOSPITAL
January		
February		
March		
April		8
May		
June		
July		
August		
September		
October		
November		
December		
Total		8

3—3623

Digitized by Google

(1) SURNAME: Smith
(2) CHRISTIAN NAME: Robert V.
(3) RANK: Pvt.
(4) COMPANY: I
(5) REGIMENT OR STAFF CORPS: 3rd F.A.
(6) AGE, YRS.: 23
(7) RACE: W
(8) NATIVITY: O.
(9) SERVICE, YRS.: 2-3/12
(10) REGISTER NO. 6-
(11) DATE OF ADMISSION. April 22 .19 17
(12) SOURCE OF ADMISSION. Command
(13) CAUSE OF ADMISSION.

Fracture, simple, eighth and ninth ribs, left, in mid-axillary line. Accidentally inourred by kick of mule, while on duty at Camp Funston, Leon Springs, Texas, April 22, 1917.

Hosp.

(14) IN LINE OF DUTY? Yes
(15) COMPLICATION, SEQ., ETC.,

(16) DISPOSITION.

Duty.

(17) DATE OF DISPOSITION. April 29 .19 17
(18) NAME OF HOSPITAL, ETC.,

Camp Hospital,
Leon Springs, Texas.

(19) SENT WITH REPORT OF S. & W. FOR MONTH OF Apr. 19 17
(20) FROM Same
(21)

W.J.S.
Major M.C. U. S. ARMY.

NO. (22) OF DISPOSITION } CLASSIFICATION { NO. (23) OF ADMISSION

(24) SUB NO.____ FORM 52 MEDICAL DEP'T U. S. ARMY. (REVISED OCT. 17, 1910). (25) SUB NO.____

03—3623

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(26) DAYS OF TREATMENT IN CURRENT CASE, CURRENT YEAR

YEAR, 19 17	IN QUARTERS	IN HOSPITAL
January		
February		
March		
April		7 9
May		
June		
July		
August		
September		
October		
November		
December		
Total		7

03—3623

Digitized by Google

(1) SURNAME: Roach
(2) CHRISTIAN NAME: Selby M.

(3) RANK	(4) COMPANY	(5) REGIMENT OR STAFF CORPS
Pvt.	Hq.	12th Infantry

(6) AGE, YRS.	(7) RACE	(8) NATIVITY	(9) SERVICE, YRS.
22	W	S.C.	4/12

(10) REGISTER NO. 11-

(11) DATE OF ADMISSION. April 27 '17
(12) SOURCE OF ADMISSION. Tr.fr.R.I.12th Inf
Ft.Huachuca,Ariz..Orig.edm.2/2/17(a
(13) CAUSE OF ADMISSION.

1. Myopia,simple,progressive.RE 5/200-LE 5/200.Corrected to 20/200 in both eyes by minus 17.0 Sph.and minus 18.0 Sph.. Staphyloma posticum present in both eyes.
2. Irternal strabiamus,10 deg.right (b)
Hosp.

(14) IN LINE OF DUTY? 1 No. 2 No. 3 No.
(15) COMPLICATION, SEQ., ETC.

SPACE ABOVE THIS LINE TO BE LEFT BLANK

(25) DAYS OF TREATMENT IN CURRENT CASE, CURRENT YEAR

YEAR, (25) 17	IN QUARTERS	IN HOSPITAL
January		
February		
March		
April		4
May		
June		
July		
August		
September		
October		
November		
December		
Total		4

62—3023

(a)Reg.#13456.
(b) eye.
3. Syphilis,probably congenital, manifested by double plus Wassermann.
All existed prior to enlistment.

(c) enlistment.Disability:- One third (1/3).

(16) DISPOSITION. Discharged S.C.D. on account of (see space # 13).Not in line of duty.Existed prior to (c)
(17) DATE OF DISPOSITION. April 30 '17
(18) NAME OF HOSPITAL, ETC.

Camp Hospital,
Leon Springs,Texas.

(19) SENT WITH REPORT OF S. & W. FOR MONTH OF Apr. '17
(20) FROM Same
(21)

W.J.S.
Major M.C. U. S. ARMY.

(22) NO. OF DISPOSITION } CLASSIFICATION { (23) NO. OF ADMISSION

(24) SUB NO.____ FORM 52 MEDICAL DEP'T U. S. ARMY. (REVISED OCT. 17, 1910). (25) SUB NO.____
62—3023

Digitized by Google

(1) SURNAME: Jordan | (2) CHRISTIAN NAME: Ernest A.

(3) RANK	(4) COMPANY	(5) REGIMENT OR STAFF CORPS
Mech.	M.C.	3rd Cavalry.

(6) AGE, YRS.	(7) RACE	(8) NATIVITY	(9) SERVICE, YRS.
22	W	N.Y.	2-11/12

(10) REGISTER NO. 4-14-

(11) DATE OF ADMISSION, April 30 , 19 17

(12) SOURCE OF ADMISSION, Command.

(13) CAUSE OF ADMISSION,

Gonorrheal epididymitis, chronic, right. (Old)

Hosp.

(14) IN LINE OF DUTY? No

(15) COMPLICATION, SEQ., ETC.,

April 30, 1917:- Epididymotomy, right. Chloroform.

(16) DISPOSITION,

Remaining

(17) DATE OF DISPOSITION, , 19

(18) NAME OF HOSPITAL, ETC.,

Camp Hospital, Leon Springs, Texas.

(19) SENT WITH REPORT OF S. & W. FOR MONTH OF Apr. 19 17

(20) FROM Same

(21) W.J.S.

Major M.C. U. S. ARMY.

NO. (22) OF DISPOSITION } CLASSIFICATION { NO. (23) OF ADMISSION

(24) SUB NO..... (25) SUB NO.....

FORM 52
MEDICAL DEP'T U. S. ARMY.
(REVISED OCT. 17, 1910).

63—3623

SPACE ABOVE THIS LINE TO BE LEFT BLANK

(26) DAYS OF TREATMENT IN CURRENT CASE, CURRENT YEAR

YEAR, 19 17	IN QUARTERS	IN HOSPITAL
January		
February		
March		
April		1
May		
June		
July		
August		
September		
October		
November		
December		
Total		1

63—3623

Digitized by Google

(1) SURNAME: Kirby
(2) CHRISTIAN NAME: William J.,
(3) RANK: Cpl.
(4) COMPANY: F
(5) REGIMENT OR STAFF CORPS: 3rd Cavalry
(6) AGE, YRS.: 38
(7) RACE: W
(8) NATIVITY: N.J.
(9) SERVICE, YRS.: 11-3/12
(10) REGISTER NO.: 12-
(11) DATE OF ADMISSION: April 28 . 19 17
(12) SOURCE OF ADMISSION: Command.
(13) CAUSE OF ADMISSION: Deflection of nasal septum,right, the result of old fracture of nasal bone,right side,accidentally incurred by horse throwing up head and striking nose of soldier, at drill at Camp Wilson,Tex.,March 1915. Hosp.
(14) IN LINE OF DUTY? Yes.
(15) COMPLICATION, SEQ., ETC.: April 29,1917:- Refracture of plate of ethmoid bone and fragments placed in their proper position.Cocaine.
(16) DISPOSITION: Duty improved.
(17) DATE OF DISPOSITION: April 30 . 19 17
(18) NAME OF HOSPITAL, ETC.: Camp Hospital, Leon Springs,Texas.
(19) SENT WITH REPORT OF S. & W. FOR MONTH OF Apr. 19 17
(20) FROM: Same.
(21) W.J.S. Major M.C. U. S. ARMY.
NO. (22) OF DISPOSITION } CLASSIFICATION { NO. (23) OF ADMISSION
(24) SUB NO. ..... (25) SUB NO. .....
FORM 52 MEDICAL DEP'T U. S. ARMY. (REVISED OCT. 17, 1910).
3—3623

SPACE ABOVE THIS LINE TO BE LEFT BLANK

(26) DAYS OF TREATMENT IN CURRENT CASE, CURRENT YEAR

YEAR, 19 17	IN QUARTERS	IN HOSPITAL
January		
February		
March		
April		2
May		
June		
July		
August		
September		
October		
November		
December		
Total		2

3—3623

Digitized by Google

Transfer card.

(1) SURNAME: Smith
(2) CHRISTIAN NAME: John J.

(3) RANK	(4) COMPANY	(5) REGIMENT OR STAFF CORPS
Sgt.	T.C.#4	Q.M.C.

(6) AGE, YRS.	(7) RACE	(8) NATIVITY	(9) SERVICE, YRS.
34	W	Colo.	11-

(10) REGISTER NO. 29384
(11) DATE OF ADMISSION. April 17 1917
(12) SOURCE OF ADMISSION. Command.
(13) CAUSE OF ADMISSION. Undetermined. (Under observation for Tuberculosis, chronic.)

Hosp.

(14) IN LINE OF DUTY? Yes
(15) COMPLICATION, SEQ., ETC.,

(16) DISPOSITION. Tr.to B.H.No.2, Ft.Bliss, Texas.
(17) DATE OF DISPOSITION. April 18 1917
(18) NAME OF HOSPITAL, ETC., Infirmary U.S.Troops, Columbus, N.M.
(19) SENT WITH REPORT OF S. & W. FOR MONTH OF Apr'l 17
(20) FROM Same
(21) R. ROE
1st Lt.M.R.C. U. S. ARMY.

NO. (22) OF DISPOSITION } CLASSIFICATION { NO. (23) OF ADMISSION

(24) SUB NO.____ (25) SUB NO.____

FORM 82
MEDICAL DEP'T U. S. ARMY.
(REVISED OCT. 17, 1910).

2—3623

SPACE ABOVE THIS LINE TO BE LEFT BLANK

(26) DAYS OF TREATMENT IN CURRENT CASE. CURRENT YEAR

YEAR, 19 17	IN QUARTERS	IN HOSPITAL
January		
February		
March		
April		2
May		
June		
July		
August		
September		
October		
November		
December		
Total		2

2—3623

Digitized by Google

Transfer card.

(1) SURNAME Bernier (2) CHRISTIAN NAME Edward J.

(3) RANK	(4) COMPANY	(5) REGIMENT OR STAFF CORPS	
Pvt.	H	S.C.	
(6) AGE, YRS.	(7) RACE	(8) NATIVITY	(9) SERVICE, YRS.
22	W	R.I.	2-/1/12

(10) REGISTER NO. 3333

(11) DATE OF ADMISSION. January 1 1917

(12) SOURCE OF ADMISSION. Tr.fr.Inf.U.S.T. Brownsville,Tex.Orig.adm.12/30/16(a)

(13) CAUSE OF ADMISSION.

Appendicitis,acute,catharral.

T.C.D.not concurred in.

Hosp. to Qrs. January 20,1917.

(14) IN LINE OF DUTY? Yes

(15) COMPLICATION, SEQ., ETC.

January 2,1917.
Appendectomy.Ether.

(16) DISPOSITION. Tr.to B.H.No.1,Ft.Sam Houston,Texas.

(17) DATE OF DISPOSITION. January 29 1917

(18) NAME OF HOSPITAL, ETC.

B.H.No.3,Brownsville,Texas.

(19) SENT WITH REPORT OF S. & W. FOR MONTH OF Jan. 1917

(20) FROM

(21)

WM. SMITH.
Lt.Col.M.C. U. S. ARMY.

NO. (22) OF DISPOSITION } CLASSIFICATION { NO. (23) OF ADMISSION

FORM 82
MEDICAL DEP'T U. S. ARMY.
(REVISED OCT. 17,1910).

(24) SUB NO. ..... (25) SUB NO. .....

SPACE ABOVE THIS LINE TO BE LEFT BLANK

(26) DAYS OF TREATMENT IN CURRENT CASE, CURRENT YEAR

YEAR, 19 17	IN QUARTERS	IN HOSPITAL
January	10	19
February		
March		
April		
May		
June		
July		
August		
September		
October		
November		
December		
Total	10	19

(a) Reg. No. 2323.

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SURNAME	CHRISTIAN NAME
Smith	George E.

RANK	COMPANY	REGIMENT OR STAFF CORPS
General Prisoner		(Formerly Pvt.CO.E, 17th Infantry)

REGISTER NUMBERS

9-

INDEX TO REGISTER OF PATIENTS
AT
Camp Hospital,Leon Springs,Texas.

Form 52a
MEDICAL DEPARTMENT, U. S. A.
(Authorized Aug. 25, 1910)

SURNAME	CHRISTIAN NAME
Bivins	Beacher

RANK	COMPANY	REGIMENT OR STAFF CORPS
Pvt.	K	19th Infantry

REGISTER NUMBERS

7-1

INDEX TO REGISTER OF PATIENTS
AT
Camp Hospital,Leon Springs,Texas.

Form 52a
MEDICAL DEPARTMENT, U. S. A.
(Authorized Aug. 25, 1910)

Digitized by Google

SURNAME	CHRISTIAN NAME
Murphy	Patrick J.

RANK	COMPANY	REGIMENT OR STAFF CORPS
Civilian Q.M.C.		

REGISTER NUMBERS

8-

INDEX TO REGISTER OF PATIENTS

AT

Camp Hospital, Leon Springs, Texas.

FORM 52a
MEDICAL DEPARTMENT, U. S. A.
(Authorized Aug. 25, 1910)
03—3638

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DATE	COMPANY AND REGIMENT, OR CORPS	Remaining at Last Report	ADMISSIONS			Total to be Accounted For	DISPOSED OF										REMAINING			STRENGTH OF COMMAND					
			From Command	From Other Sources: By Transfer	From Other Sources: Other-wise		To Duty	Died	Discharged for Disability	Deserted	Discharged by Expiration of Term	Transferred to Insane Asylum	Transferred to other Hospital	Otherwise	Total	In Hospital	In Quarters	Total	Officers	Enlisted Men: W.	C.	F.	P. R.	Indian Scouts
1917																									
June 24	Officers	2	1			3	1								1	1	1	2							
	Med. Dept	1		1		2		1							1	1		1							
	Q.M.C.	2	1			3	2								2	1	1								
	Hqs. 3cav	1	1			2			1						1		1	1							
	A. 3dcav	3				3				1					1	2		2							
	B. 3dcav	2	2			4					1				1	2	1	3							
	Casuals	4		1		5						1	1		2	3		3	8	300	0	0	0		
	Civilians	1			1	2								1	1	1		1							
	Total	16	5	2	1	24	3	1	1	1	1	1	1	1	10	11	3	14							
															John Smith. Major. M.C.										
Sept	1 a.m.	My	21	A	12																				

*Regular Army. ~~*National Army.~~
~~*National Guard.~~ ~~*Enlisted Reserve Corps.~~

CERTIFICATE OF DISABILITY FOR DISCHARGE

OF

BRADY (Surname.), FRANK (Christian name.)

Private, (Grade.) Co."K" 19th. Inf. (Company and regiment or arm or corps or department.)

Enlisted Mar.10, 191 7 at Fort Thomas, Ky.

by 1st. Lt. J.F.Hawley, MRC.

Age at enlistment 23 yrs. and 6 mos.; occupation, Farmer

Prior service (total) 0 yrs. and 0 mos. Last discharged None, 19

Recommended for discharge on account of Epilepsy.

Grand mal. (State nature of disability.)

Became unfit for duty from present disease or injury (date) May 1/17

Disease contracted or injury received (date and place) Unknown,

existed prior to enlistment.

When disability arose soldier was (state duty and service. If absent from company, cause and date) Existed prior to enlistment. Disability first noticed ~~while enroute to this post from~~

Cause of disease, or circumstances under which it appeared: Ft.Slocum NY.

[NOTE.—In case of wounds (other than wounds received in action), or injury, if the company commander has no personal knowledge as to how received, certificates of officers, affidavits of enlisted men, or other parties if practicable, having such knowledge, special reference being made therein as to the sobriety of the soldier at the time of the occurrence, will be procured and a copy appended to the certificate of disability, and the number so appended will be enumerated hereon. If no information is obtainable, so state.]

Cause unknown.

Disability ~~was~~ was not incurred in line of duty.

A.K.BROWN.

Captain, 19th. Inf.

Commanding Co. "K"

Fort Sam Houston, Tex.

May 26, 19 17.

*Strike out words not applicable.

FORM No. 17, A. G. O.
Ed. Nov. 7-17—300,000.

(1) 3—2836

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(2)

REPORT OF BOARD OF MEDICAL OFFICERS.

From a careful consideration of all the evidence obtainable in the case and a critical examination of the soldier,

WE FIND: That he is unfit for service as a soldier because of

1. Epilepsy. Grand mal.
Incapacitates by reason of epileptiform seizures, rendering him unable to perform the duties of a soldier.

That the disqualifying disability *did ~~did not~~ exist prior to enlistment and *did not ~~did~~ originate in line of duty.

That the medical officer who enlisted the soldier ~~is~~ is not blamable (367 A. R.).

WE THEREFORE RECOMMEND

That the soldier be discharged for disability which ~~was~~ was not incurred in line of duty.

Length of time case has been under observation of one or more members of the board since May 1st. 1917.

In view of occupation, to what extent is he disabled from earning subsistence?

One sixteenth (1/16)

The soldier *did ~~did not~~ decline treatment for the relief of disability (161 A. R.).

A.B.DOE	Major	M.C.
(Name.)	(Rank.)	(Corps.)
R.C.ROE	Capt.	M.C.
(Name.)	(Rank.)	(Corps.)

*Strike out words not applicable.

3—2520

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1st Indorsement.

To the Commanding Officer,

Fort Sam Houston, Tex. May 29/17

(Post or Regiment.) (Date.)

2d Indorsement.

Headquarters ....., 19

To the Commanding General.....

.....

.....

.....

.....

.....

Commanding.....

..... Indorsement.

.....

.....

.....

.....

.....

.....

..... Indorsement.

Headquarters ....., 19

To the Commanding Officer:

.....

(Post or Regiment.)

.....

.....

The discharge of .....

.....

is .....

By command of .....

.....

....., Adjutant.

(Additional sheets for indorsements, if required, to be attached here.)

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Par 465 G.P.

BASE HOSPITAL NO. 1.
FORT SAM HOUSTON, TEXAS.
June 18, 1917.

From: The Commanding Officer.

To: The Adjutant General of the Army.
(Through military channels.)

Subject: Insane soldier.

1. In compliance with par. 465, AR., report a case of insanity in the person of Private William Jones, Medical Department, a patient in hospital.

2. Detailed medical history, certificate, proceedings of a board of medical officers, and certificate of disability are inclosed.

Major, Medical Corps.

4 incls.
dcm.

Note: A complete history of the case to accompany letter and certificate. Patients transferred to Government Hospital for the Insane: See pars. 466, 467, 468.

We, the undersigned, certify that Private William Jones, Medical Dept., a patient in hospital, is suffering from: General paralysis of the insane. Not in line of duty.

He can not be released from military control without danger to himself and others.

He was accepted for enlistment June 15/17, at Chicago, Ill., and enlisted at Fort Slocum, NY., June 17/17.

At date of enlistment he gave as the name and address of nearest relative: (Father) John Jones, 314 Wabash Ave., Chicago, Ill.

Major, Medical Corps.

1st Lieut., Medical Corps.

Fort Sam Houston, Texas,
June 18/17

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See Par 3-7 A.R.

BASE HOSPITAL NO. 1.
FORT SAM HOUSTON, TEXAS.
June 26,1917.

From: Major Andrew E. Jones,Quartermaster Corps.

To: Commanding General,So.Dept.,Fort Sam Houston,Texas.

Subject: Leave of absence.

1. Request leave of absence for two months on account of sickness.

Andrew E. Jones.

1st Ind.
Base Hospital No.1,Fort Sam Houston,Texas,June 27,1917.- To The Commanding General Southern Department,Fort Sam Houston,Texas.

1. Forwarded recommending approval.

2. Certificate,Medical,to accompany application for leave enclosed.

1-incl.

George E. West
Major,Medical Corps,
Commanding.

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Par 37 A.R.

FORM OF MEDICAL CERTIFICATE TO ACCOMPANY APPLICATION FOR LEAVE OF ABSENCE.

Major Andrew E. Jones, of the Quartermaster Corps., United States Army, having applied for a certificate in support of an application for leave of absence on account of sickness, I do hereby certify that I have carefully examined this officer and find* that he is suffering from an acute exacerbation of chronic myocardial degeneration, and chronic interstitial nephritis; that he has been suffering from this acute exacerbation for a period of four weeks dating from June 5, 1917, and that the prognosis is good for the acute symptoms; that the disease can be satisfactorily treated in the department in which the officer is serving, but that a change of climate will afford a prospect of more rapid recovery. I recommend the climate of the sea shore or the northern lakes on account of the bracing effect of cooler atmosphere. I do not believe that the disease needs any special treatment or treatment by a specialist. The disease at present time incapacitates him from performing any duty, but I believe within two months he will be able to perform all duties, except field duty.

I declare my belief that, in consequence of the disability above specified, this officer will not be able to resume his duties in a less period than two months; and I recommend, as necessary for the good of the officer and the best interests of the service, that a leave of absence for that period be granted him, subject to the conditions stated in the body of this certificate.

Dated at Fort Sam Houston, Texas this 27th day of June, 1917.

(SIGNATURE) George E. West

Major, Med. Dept., U. S. A.

* Here state explicitly the nature, seat, and degree of the disease, wound, or disability, and when possible the cause thereof; the period during which the officer has suffered from its effects, and the prognosis in the case; and give opinion whether the disease, wound, or disability can be satisfactorily treated within the department or division in which the officer is serving, or whether a change of climate, place, or region within the United States is necessary to save life, to prevent permanent disability, or to afford a prospect of a more rapid or perfect recovery. In the latter case, the especial place or region of country recommended will be designated, and the reasons for the opinion given. State also opinion whether the disease, wound, or disability requires treatment by a specialist, and if so, give the nearest place or region where such special treatment as may be required can be obtained, and state whether the wound, disease, or disability entirely incapacitates the officer for *all* duty, or whether he is capable of doing special or light duty; and, if capable of performing any duty, specify the kind of duty which he may undertake without endangering his ultimate cure.

NOTE 1.—Army medical officers in granting certificates to accompany applications for leaves of absence will use the foregoing form. Where the officer (in the absence of an Army medical officer) substitutes his own certificate, he will be held responsible for any departure from the orders and instructions herein contained.

NOTE 2.—If an officer is unable to return to his post at the expiration of his leave, and can not procure the certificate of a medical officer of the Army, he will change the foregoing form to make it appear as his own certificate, on honor.

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See Par. 1446 *A. R.*

BASE HOSPITAL NO. 1.
FORT SAM HOUSTON, TEXAS.
June 18, 1917.

From: The Commanding Officer.

To: The Commanding General, Southern Department.

Subject: Transfer of patient to Fort Bayard, NM.

1. Recommend that Private James Brown, Company D, 14th Infantry, a patient in hospital, be transferred to General Hospital, Fort Bayard, NM., for further treatment, on account of: Tuberculosis, pulmonary, chronic, upper lobe, right lung. In line of duty.

2. An attendant will not be necessary.

3. Record of service: 15 yrs. continous service.

4. If discharged at Fort Bayard, soldier is willing to remain there as a beneficiary of the Soldier's Home for a period of three months from date of admission thereto.

5. Medical history and certificate inclosed.

Major, Medical Corps.

2 incls.
dem.

Note: A complete history of the case to accompany the letter and certificate.

I certify that Private James Brown, Company D, 14th Infantry, a patient in hospital, is suffering from: Tuberculosis, pulmonary, chronic, upper lobe, right lung. In line of duty.

In my opinion, treatment at the General Hospital, Fort Bayard, NM., will conduce to the more rapid recovery of the patient.

Major, Medical Corps,

Surgeon.

Fort Sam Houston, Texas,

June 18, 1917.
dem.

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See Par 1446 A.R.

BASE HOSPITAL NO. 1.
FORT SAM HOUSTON, TEXAS.

June 18, 1917.

From: The Commanding Officer.

To: The Commanding General, Southern Department.

Subject: Transfer of patient to Hot Springs, Ark.

1. Recommend that Private Arthur E. Bird, Company A, 9th Infantry, a patient in hospital, be transferred to Army and Navy General Hospital, Hot Springs, Ark., for further treatment, on account of: Articular rheumatism, chronic; involving left knee and right ankle. In line of duty.

2. An attendant will not be necessary.

3. Record of service: Enlisted Dec. 26/16. No prior service.

4. Medical history and certificate inclosed.

Major, Medical Corps.

2 incls.
dem.

Note: A complete history of the case to accompany the letter and certificate.
Authority: See 1446 AR.

I certify that Private Arthur E. Bird, Company A, 9th Infantry, a patient in hospital, is suffering from: Articular rheumatism,,chronic; involving left knee and right ankle. In line of duty.

In my opinion, treatment at the Army and Navy General Hospital, Hot Springs, Ark., will conduce to the more rapid recovery of the patient.

Major, Medical Corps,

Surgeon.

Fort Sam Houston, Texas,

June 18, 1917.
dem.

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FORM 50
MEDICAL DEPARTMENT, U. S. A.
(Revised May 26, 1915.)

1ST INDORSEMENT

SANITARY REPORT

FROM

Camp Funston,
(Designation of post or command.)

Leon Springs, Texas.

FOR

April 12 to 30, 1917

RENDERED BY

John Doe,

Major Medical Corps, U. S. Army.

NOTE.—Reference may be made to former reports containing information in detail on any subject mentioned, but a statement of the general condition should not be omitted.

Statements requiring more space than provided herein should be made on a separate sheet of this size, inclosed and attached. Such statements should be referred to under their subjects.

3—2373

☞ Enter record marks and numbers below this line.

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Sec Par 1387 A.R.

SANITARY REPORT

For the period of April 12 to 30, 191 7, *at* Camp Funston, Leon Springs, Texas.
(Designation of post or command.)

From: The Surgeon.

To: The Commanding Officer.

I submit the following report on the sanitary condition of this command during the month designated:

1. Public buildings and grounds, or camps and their surroundings: In good condition generally.

2. Drainage, sewerage, and disposal of wastes: Surface drainage by ditches.
Disposal of wastes:-Latrines and incinerators. Latrines burned out daily with oil and straw.
Conditions satisfactory.

3. Sanitary appliances (filters, sterilizers, incinerators, odorless excavators, etc.): 60 Forbes-Waterhouse Sterilizers, 25 Incinerators. 14 U.S. odorless wagons. 10 Sanitary carts. All in good condition.

4. Water supply: From artesian wells. Quantity ample. Quality excellent.

5. Food supply and its preparation: Good and well prepared.

(a) Quality of the milk: Good. Condensed milk generally used.

(b) Condition of dairies: Satisfactory. (Under supervision San Antonio Board of Health).

6. Clothing of the men: Good.

7. Character and causes of prevailing diseases, and measures taken to prevent them: A number of cases of measles and mumps have occured during the month.
Tents, bedding and clothing aired and sunned daily, and all contacts isolated.

8. Dates of semimonthly physical inspections of the command (by organizations):
April 15th and 30th, 1917. Cos. "A" "B" "C" "D" "E" "F" "G" "H", Hq. Sup. & MG Cos. 4th. Inf.
April 16th. and 29th. 1917. Detach. Med. Dept. Q.M. Corps, Sig. Corps & Ord. Dept.

(a) Number of new cases of venereal disease, 115; rate per thousand of strength, 12.74

(b) Number of venereal prophylactic treatments given: 1400

9. Recommendations: That the practice of men feeling indisposed reporting without delay for examination by a medical officer, be continued.

John Doe.
Major Medical Corps,
U. S. Army.

Date, May 1st, 191 7

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See G.R. 15-13 - 15-18

Form No. 886.
(Approved by the Secretary of War August 29, 1911.)

FOR ALL ORDNANCE PROPERTY EXCEPT THE SEACOAST ARMAMENT AND ITS EQUIPMENT.
(The instructions on the back of this form should be followed in making requisitions.)

REQUISITION for Ordnance Stores for the use of

Detachment Med. Dept.

Base Hospital No 1,

Date June 15, 1917.

Military Dept. Southern

Station Fort Sam Houston, Texas.

NUMBER IN THE COMMAND.		NUMBER OF HORSES AND MULES.	
Officers	36	Riding horses	0
Sergeants	25	Team horses	0
Corporals	18	Animals, pack	0
Musicians and privates	238		
Total	317	Total	

TOTAL QUANTITIES IN ORGANIZATION, BOTH ASSEMBLED TO EQUIPMENT AND AS SPARE. Serviceable.	Worn Out.	STORES NOW NEEDED.	NAMES OF ARTICLES. ☞ If ammunition or guns are required, give the exact caliber. The model of guns, carriages, caissons, small arms, range finders, or other instruments should always be indicated where parts are required. Use the correct names of stores as given in Ordnance price lists and publications.	STATE IN THIS COLUMN FOR WHAT PURPOSE REQUIRED.	NUMBER ISSUED AT POST. Enter in red ink.	APPROVED FOR ISSUE BY CHIEF ORDNANCE OFFICER.	NUMBER ISSUED FROM ARSENAL.
31	0	250	Belts, web, for Hosp. Corps	To equip detachment			
31	0	250	Ration bags, cavalry	" " "			
31	0	250	Hand ax, infantry	" " "			
31	0	250	Hand ax, carriers.	" " "			

I CERTIFY that the number, quality, and use of each article in the foregoing Requisition are correctly stated.* (See over.)

None of above articles are asked for to replace ones merely worn or unsightly.

☞ The stores will be INVOICED to the officer signing here.

William L. Sheep

Captain, Medical Corps.

(Chief Ordnance Officers will sign their approval here, giving station and date. See paragraph 1518, A. R. 1913, on back of requisition.)

EXAMINED AND APPROVED:

..... *Commanding Post.*

APPROVED:

..... *Commanding Division.*

I CERTIFY that the articles stated in this column were issued by me on this requisition, ..., 191

Sign Name and Post.

I CERTIFY that the articles stated in this column were issued by me on this requisition, ..., 191

Sign Name and Post.

Ed. Apr. 20-14—50,000. 3—2778

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REQUISITION FOR ORDNANCE STORES

(For all Ordnance Property except the seacoast armament and its equipment.)

For use of Co......, *Reg't of*.....

Co. commanded by.....

Station.....

Military Dep't.....

Date.....

To be forwarded to.....

.....

.....

.....

.....

O. S. No...... *from* .....

O. S. No...... *from* .....

O. S. No...... *from* .....

Date ....., *191*

3—2378

DIRECTIONS TO OFFICERS MAKING REQUISITIONS AND TO ISSUING AND DEPOT OFFICERS.

(Army Regulations, 1913.)

1513. In time of peace, ordnance and ordnance stores are issued from the various arsenals and depots, to the extent authorized by regulations, on requisitions submitted in accordance with existing orders.

1518. Requisitions for ordnance and ordnance stores not on hand within a department must be approved by the immediate commanders. The personal approval of the department commander, or of the chief ordnance officer of his department, is necessary, but in the absence of the department commander the approval may be made in his name by one of his staff officers.

1519. Requisitions will be made in conformity with the supply tables prepared by the Chief of Ordnance, unless extraordinary circumstances to be plainly set forth in each case, should require a larger supply of one or more of the articles authorized.

For exceptions to the above regulations as to requisitions for ordnance and ordnance stores of certain kinds, see Circular 87, War Department, of 1907, General Orders 100, War Department, of 1911, and Section IV, General Orders 15, War Department, May 4, 1912, as amended by General Orders, War Department, No. 24, dated August 6, 1912.

* When stores are asked for to replace those on hand but not condemned by an inspector, the officer will add the following to this certificate: "None of the above articles is asked for to replace others which are merely worn or unsightly."

In asking for new model equipments, the requisition should specify the number of stores on hand of like nature to those wanted, though differing in model or pattern, such as saddles "russet leather" and saddles "black leather," etc., the number on hand of each, "black" and "russet" leather, being given.

Where unusual requests are made for special arms or stores not on ordnance supply list for the organization for which they are desired, on account of the special service or station of the command, separate requisition should be made, marked "SPECIAL," and accompanied by a letter explaining the peculiar circumstances which require the command to have such article.

Supply tables of cleaning and preserving materials, saddler's materials, carpenter's, saddler's, and blacksmith's tools, etc., may be procured from the department chief ordnance officer.

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Issuing or Supply Officer's Voucher No. .....

Receiving Officer's Voucher No. .....

TRANSFER OF ORDNANCE PROPERTY UNDER A. R. 1535 OF 1913

AS AMENDED BY ARMY REGULATIONS CHANGES NO. 1 OF 1914

From .....

To .....

.....

Invoiced the ..... day of 191

Received the ..... day of ....., 191

WAR DEPARTMENT,
OFFICE OF THE CHIEF OF ORDNANCE.
(Authorized by the Secretary of War, April 4, 1908.)
Form No. 152.
Revised January 2, 1914.
Revised November 9, 1916.
Ed. Nov. 9-16—50,000.

32668-978-1
38251-278-1

3—[illegible]

INSTRUCTIONS

1. This blank will be used only for transfer of ordnance stores under A. R. 1535 of 1913, as amended by Army Regulations changes No. 1 of 1914.

2. Articles of personal equipments or other ordnance property which a detached soldier carries with him, or for which he may be indebted to the United States at the time of his transfer, will be entered on this form as an invoice and receipt, made in duplicate, each of the two copies will be signed by the responsible or issuing officer and by the soldier acknowledging receipt of the stores, including those missing. One of these signed vouchers will be forwarded with the descriptive list or descriptive and assignment card of the soldier; the other copy will constitute the voucher under which the issuing or accountable officer will drop all the articles enumerated on the voucher from his return and in each of such cases the voucher is required to accompany the return when forwarded to the Chief of Ordnance. In such cases the vouchers will not be forwarded to the Chief of Ordnance in advance of the return. In case the soldier is detached or transferred from an organization provided with unit accountability equipment, the retained copy of the voucher will be turned over by the organization commander to the supply officer, who will issue to the organization commander like stores to replace all those covered by the voucher, excepting such as were previously replaced and dropped under a statement of charges, and the supply officer will use this voucher for dropping such articles from his return.

3. On arrival of the soldier at his destination, all articles appearing on the transfer blank accompanying the descriptive list or descriptive and assignment card will be taken up by the proper officer, who will receipt for the same on this blank and forward it immediately to the Chief of Ordnance. All articles missing on arrival will be charged against the soldier and dropped from the return of the accountable officer in the usual manner. In case the soldier upon his arrival at destination is assigned to an organization provided with unit accountability equipment, all the articles appearing on this transfer voucher accompanying his descriptive list will be taken up by the post ordnance officer, or, in case the organization is serving away from a post, then by the designated issuing officer, and such of the articles as are missing will be charged against the soldier on the pay rolls of the organization and dropped from the return of the accountable officer under a statement of charges (Ordnance Department Form No. 86) made by the commanding officer of the organization and turned over to the accountable officer.

4. Unless the arrangements for the journey require the use of ordnance property en route none will be transferred with such soldiers.

5. A copy of the transfer blank will be kept by each accountable officer for his retained return.

6. Separate duplicate invoice and receipt blanks will be prepared for each soldier transferred, and the blanks will, when practicable, indicate the destination of the soldier.

7. The foregoing instructions do not apply to cases where a detachment of soldiers is detached from the command to which they belong for subpost or any other separate duty, as they are still borne on the rolls of that organization and not transferred within the meaning of A. R. 1535 of 1913, as amended by Army Regulations changes No. 1 of 1914.

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See par. 1535 A.R.

FOR TRANSFER OF ORDNANCE PROPERTY UNDER A. R. 1535 OF 1913

AS AMENDED BY ARMY REGULATIONS CHANGES NO. 1 OF 1914

INVOICE.

POST OF Fort Sam Houston, Texas.

Date January 15, 1917

I hereby certify that John Early, a member of det. Medical department, left this post on the date above mentioned for Fort Myer, Va., having had issued to him the following-named ordnance stores, which will be dropped from the next return to be rendered accounting for the property pertaining to * det. Med. dept.

2 Canteen-haversack strap	1 Cup, aluminum or tin	1 Knife, Hosp. Corps.
1 Haversack	1 Knife	1 Scabbard for Hosp Corps knife.
1 Meat can tin.	1 Fork	
1 Blanket roll straps, (set)	1 Spoon	1 Waist belt.
1 Canteen, tin.	1 Pouch, 1st aid packet	

Wm. H. Smith

Captain, Medical Corps.

Issuing Officer.

I hereby acknowledge to have received the above-named ordnance stores.

(Signature of Soldier) John Early **

Private, Med. Dept.

POST OF ....., Date ....., 191

RECEIPT.

All of the above-named articles are taken up on the current return accounting for ordnance property pertaining to * ...., and missing articles charged.

.....†

....., U. S. A.

Receiving Officer.

Issuing or Supply Officer's Voucher No. ..... *Receiving Officer's Voucher No.* .....

* Here fill in the name of the organization, post, command, or accountability to which the return pertains.

** The receipt of the soldier authorizes the issuing or accountable officer to drop the stores from his property return, on submitting as a voucher this blank accomplished to include this receipt.

† After signing and numbering this receipt as a voucher the receiving officer will forward it directly to the Chief of Ordnance, except in the Philippine Department, where it will be sent through the Department Ordnance Officer. The return of the receiving officer transmitted to the Chief of Ordnance showing the taking up of these stores will not, therefore, be accompanied by this receipt. 3—600

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Req'd.	Issued.	Ret'd to Q. M.	Not issued.	Articles.	Sizes.																Unit prices.	Totals		
				Brought forward																				
				Shoes, russet, pairs:	8	8½	6	6½	7	7½	8	8½	9	9½	10	10½	11	11½	12						
2				Last A		1				1															
4				Last B			1	1			1		1												
3				Last C	1				1			1													
7				Last D		2		2		1				1	1										
5				Last E			1					3				1									
1				Last EE													1								
				Stockings, pairs:	9½	10	10½	11	11½	12															
40				Cotton	12		18		10	xxx															
				Woolen, heavy		xxx		xxx		xxx															
24				Woolen, light	6	6		12																	
				Stripes, pairs:	Sgt.	Corp.	Mus.				Art.	Cav.	Eng.	H.C.	Inf.	M.C.	Nav.	Ord.	Q.M.	Sch.	Big.				
				Service	xxx	xxx	xxx																		
				Trouser												xxx	xxx								
					36	38	40																		
				Suspenders, pairs																					
				Tags, identification																					
				Tape, identification, yds.																					
				Trousers, pairs:	1	2	3	3½	4	4½	5	5	5¼	5½	6	6¼	6½	7	7¼	7½	8	9			
				Cotton, O. D.																					
				Denim				xxx		xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx			
				Dress, 16-oz.																					
				Dress, 22-oz.																					
10				White	2	2	3	xxx		3	xxx	xxx		xxx	xxx		xxx	xxx		xxx	xxx				
				Woolen, O. D.																					
12				Undershirts:	1	2	3	4		5	6														
				Cotton, summer	2		1	4			2														
				Woolen, winter																					
1				Buttons, coat. (Set)																					

Total value of clothing received from quartermaster

The articles enumerated in column "Required" are necessary to properly equip my command. Supply is requested.

(1) Wm H. Smith

Approved: Captain, Med. Corps.

(2)

Commanding.

(Approval required only when used as special requisition by quartermaster.)

The articles enumerated in column "Issued" were received by me from

Q. M., on , 191

(3)
(Signed by organization commander or his representative.)

Issued by:

(4)
(Signed by quartermaster or his representative.)

The articles enumerated in columns "Ret'd to Q. M." were returned to him on

, 191

(5)
(Signed by organization commander or his representative.)

Returned articles received by:

(6)
(Signed by quartermaster or his representative.)

I certify that the articles enumerated in column "Net issued" have been duly issued.

Total money value of clothing issued to enlisted men

($)

Prices were taken from G. O. No. , W. D., 191

(7)
(Signed by organization commander or his representative.)

(Above certificate (7) not to be completed on copies retained by quartermaster.)

Q. M. C. Form No. 838.

Voucher No. , P. T. 191

PROPERTY ACCOUNT

or

Quartermaster.

at

REQUISITION FOR CLOTHING (in bulk)

(Organization.)

Dated , 191

INSTRUCTIONS.

Prepared in triplicate by organization commander and sent direct to quartermaster.

Quartermaster will prepare clothing for issue and enter quantities in column "Issued" and unit prices in column "Unit price" on all copies. Organization commander or an officer designated by him will receive the clothing as the quartermaster's storekeeper and all copies of requisition will be signed as (3) and (4) as indicated. A line will be drawn through each blank space in columns "Required," "Issued," and "Net issued." Articles not listed in columns "Required" will be added in their proper order for issue. One copy of requisition will be delivered to officer receiving the clothing and two copies retained by the quartermaster as voucher to Property Account.

The issuing officer will enter on Individual Clothing Slip the quantities issued, and on the slip, duly signed, will be returned to the quartermaster as (5). Clothing not issued will be returned to the quartermaster by the organization commander or an officer designated by him, within twenty-four hours from time clothing was drawn, the quantities being entered on the three copies in column "Returned to Quartermaster." A line will be drawn through each blank space in columns "Returned" and "Net issued" as indicated. Column "Net issued" will be filled in to show net quantities issued.

After clothing has been issued and surplus returned, if any, the organization commander will immediately enter requisition to be completed and explained on that form.

The quartermaster completes his copies of the requisition and after posting to Property Account will forward one copy to the Quartermaster General and file the other copy with his retained vouchers.

When clothing is issued to enlisted men the quartermaster where suitable, in white cover quartermaster form M (1) and C. O. M. (2).

When extra sheet for Alaska (Form 213a) is used, the total value thereof will be entered on this form and included in "Total value of clothing received from quartermaster."

3—16a

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See 11557 Q.R.

WAR DEPARTMENT.
Q. M. C. Form No. 918.
(Authorized March 6, 1913.)

REQUISITION FOR CLOTHING (IN BULK).

Base Hospital No. 1, (Organization.) Fort Sam Houston, Texas (Station.) June 18, 1917

Req'd.	Issued.	Ret'd to Q. M.	Not issued.	Articles.	Sizes.																	Unit prices.	Totals.
				Bands, cap, dress (state arm)		6⅝	6¾	6⅞	7	7⅛	7¼	7⅜	7½										
3				Belts, waist	3																		
12				Breeches, pairs: Cotton, O. D., foot	1	2 1	3	4	5 4	6	7 3	8 2	9	10 1	11	12 1	13	14	15	16	17	18		
				Cotton, O. D., m't'd																			
				Woolen, O. D., foot																			
				Woolen, O. D., m't'd																			
3				Cotton O. D., foot	19 2	20 1	21	22	23	24	25	26	27	28	29	30	31	32						
				Cotton, O. D., m't'd																			
				Woolen, O. D., foot																			
				Woolen, O. D., m't'd																			
				Caps:		6½	6⅝	6¾	6⅞	7	7⅛	7¼	7⅜	7½	7⅝								
				Bakers' and cooks'		XXX	XXX								XXX								
				Dress (without bands)		XXX									XXX								
				Service											XXX								
				Winter		XXX																	
4				Chevrons, pairs: Cotton, O. D.	Arm	Pvt 1/c 4																	
				Denim																			
				Dress																			
				Gunners'																			
				White																			
3				Woolen, O. D.		3																	
				Coats:	1	2	3	3½	4	4½	4⅔	5	5½	5½	6	6½	6½	7	7½	7½	8	8	
				Denim				XXX		XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	
				Dress																			
6				Service, cotton, O. D.		1		1		2		1											
				Service, woolen, O. D.																			
				White				XXX		XXX	XXX		XXX	XXX		XXX	XXX	XXX	XXX	XXX	XXX	XXX	
20				Collars	14 6	14½ 8	15	15½ 6	16	16½	17	17½	18	18½									
4				Cords: Breast Hat	Arm 4	Med. Dept.																	
12				Drawers, pairs: Canton flannel, winter	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		
				Jean, summer	2 19	3 20	4 21		3														
				Canton flannel, winter																			
				Jean, summer																			
				Gauntlets, winter, pairs	9	10	11																
2				Gloves, pairs: Cotton, white	7½ XXX	8 XXX	8½ XXX	9	9½ XXX	10	10½ XXX	11	11½ XXX	12									
				Horse hide, yellow				1	1														
				Kidding							XXX	XXX	XXX	XXX									
				Woolen, O. D.	XXX	XXX	XXX		XXX		XXX		XXX	XXX									
6				Hats: Denim Service			6¾ 2	6⅞ 1	7 1	7⅛ 1	7¼	7⅜	7½	7⅝ XXX	7¾ XXX								
6				Laces, pairs: Breeches	6																		
12				Leggin	12																		
12				Shoe	12																		
6				Leggins, canvas, pairs	1 2	2 2	3 1	4 1	5	6													
				Neckties																			
				Ornaments (each): Cap, bronze																			
				Cap, gilt																			
4				Collar, bronze	4																		
4				Collar, bronze, letters U. S.	4																		
				Collar, gilt																			
				Collar, gilt, letters U. S.																			
				Overshoes, arctic, pairs	5	6	7	8	9	10	11	12	13										
6				Shirts, flannel, O. D.	1 1	2 3	3 2	4	5	6													
				Shirts, muslin	13	13½	14	14½	15	15½	16	16½	17	17½	18	18½							
3				Shoes, gymnasium	5	5½ 1	6	6½	7 1	7½	8	8½ 1	9	9½	10	10½	11	11½	12				

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WAR DEPARTMENT.
Q. M. C. Form No. 165.
Authorized March 6, 1915.

Pan No 57 A.R. ORIGINAL.

INDIVIDUAL CLOTHING SLIP.

The quartermaster is requested to issue the articles enumerated below to

Sgt. Leonard F. Johnson, Med. Dept.
(Name and rank of soldier.)

Wm. H. Smith

Capt. M. C., Com'd'g det. Med. Dept.

3—6871

Quantities. Req'd.	Quantities. Issued.	Articles.	Sizes. Req'd.	Sizes. Issued.	Unit prices.	Totals.
		Bands, cap, dress ... each				
		Belts, waist ... each				
		Breeches, cotton, O. D ... pairs				
		Breeches, woolen, O. D ... pairs				
		Caps, dress (without bands) ... each				
		Caps, service ... each				
		Chevrons, cotton, O. D ... pairs				
		Chevrons, dress ... pairs				
		Chevrons, woolen, O. D ... pairs				
		Chevrons, ... pairs				
		Coats, denim ... each				
		Coats, dress ... each				
1		Coats, service cotton O.D., each	6			
		Coats, ... each				
		Collars, ... each				
		Cords, breast ... each				
1		Cords, hat ... each				
		Drawers, canton flannel ... pairs				
1		Drawers, jean ... pairs	5			
		Gauntlets, winter ... pairs				
		Gloves, ... pairs				
		Gloves, ... pairs				
		Hats, denim ... each				
1		Hats, service ... each	7			
6		Laces leggin ... pairs				
6		Laces, shoe ... pairs				
		Leggins ... pairs				
1		Neckties ... each				
		Ornaments, cap, bronze ... each				
		Ornaments, cap, gilt ... each				
		Ornaments, collar, bronze ... each				
		Ornaments, collar, br., "U. S." ... each				
		Ornaments, collar, gilt ... each				
		Ornaments, collar, gilt, "U. S." ... each				
		Overshoes, arctic ... pairs				
1		Shirts, flannel, O. D ... each	3			
		Shoes, gymnasium ... pairs				
1		Shoes, russet ... pairs	8 D			
		Stockings, cotton ... pairs				
		Stockings, woolen, ... wt ... pairs				
		Stripes, service ... pairs				
		Stripes, trouser ... pairs				
		Suspenders ... pairs				
		Trousers, denim ... pairs				
		Trousers, dress, ... oz ... pairs				
		Undershirts, cotton ... each				
		Undershirts, woolen ... each				
		Total				

See Appendix II—727a.

Received the articles enumerated in column "Quantities issued."

Leonard F. Johnson
Sergeant, Med. Dept.

Slip No. 1
Date Jun 14, 1917

Issued by:

Entered on abstract ✓
Entered on statement ✓
Entered on D. L. ✓

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TREASURY DEPARTMENT
BUREAU OF WAR RISK INSURANCE
Division of
Military and Naval Insurance
FORM 1A

INSTRUCTIONS FOR FILLING OUT FORM 1B FOR ALLOTMENTS OF PAY

FORMS MUST BE FILLED OUT IN TRIPLICATE

Penalty.—Section 25: "Whoever in any claim for family allowance, compensation, or insurance, or in any document required by this act or by regulation made under this act, makes any statement of a material fact knowing it to be false, shall be guilty of perjury and shall be punished by a fine of not more than $5,000, or by imprisonment for not more than two years, or both."

Form 1B is to be filled out for each enlisted man in the military or naval forces of the United States. ("Enlisted man" here means either a male or a female, enlisted, enrolled, or drafted into active service and includes noncommissioned and petty officers and members of training camps authorized by law.)

"Pay" means pay for service in the United States according to grade and length of service, excluding all allowances.

Allotment of pay is **compulsory** as to wife, to former wife divorced and not remarried to whom alimony has been decreed, and to unmarried child under age 18 (or of any age if the child is permanently helpless mentally or physically), and the amount of the allotment will be deducted monthly from your pay and added to their allowance. In order that this deduction may be made properly, you must fill out the part of the form referring to these dependents.

The amount of this allotment shall equal the family allowance hereinafter specified except that it shall not be more than one-half your pay, or less than $15. If there be an allotment for a wife or child, a divorced wife shall be entitled to an allowance out of the difference, if any, between the allotment for the wife or child, or both, and one-half the pay.

Marriage will be conclusively presumed if you have lived together in the openly acknowledged relation of husband and wife during the two years previous to April 6, 1917, or to your entry into active service.

Give full name of a married woman, as wife or mother, in the form "Sarah Jane Smith" or "Sarah Brown Smith," instead of "Mrs. John William Smith."

"Child" includes child legally adopted before April 6, 1917, or more than six months before enlistment, whichever date is the later; stepchild, if a member of your household; and certain illegitimate children.

In case of any **illegitimate child,** write in remarks column "Ack." if you acknowledge the child.

If any child is **permanently helpless,** write in remarks column "Helpless."

These allotments may be waived upon written consent of wife or divorced wife, supported by satisfactory evidence as to her ability to support herself and children.

You may allot whatever amount you wish from your pay remaining after deducting the compulsory allotments if any, to such person or persons as you direct, subject, however, to regulations prescribed by the Secretary of War or the Secretary of the Navy.

Allotments are not compulsory toward the support of parents (including grandparents and stepparents whether of the man or the wife), grandchildren, brothers and sisters, whether of the whole or the half blood or through adoption, or stepbrothers and stepsisters, but must be made, unless special exemption is granted by the bureau, if you want them to get a Government allowance. In that event, your allotment to them must equal the Government allowance stated below except first, that you need not allot to them more than half your pay and second, that you must allot to them at least $5 a month or one-seventh of your pay, whichever is greater, if you are allotting to wife, divorced wife, or child, and at least $15 a month if you are not allotting to wife, divorced wife, or child.

If one-half of your pay is not allotted, regulations by the Secretary of War or the Secretary of the Navy may require that any portion of such of your half pay as is not allotted shall be deposited with interest thereon to your credit.

Family allowances according to the amounts in the following schedule will be paid by the United States to your wife or child while you are making compulsory allotments to them:

Schedule of family allowances (monthly)

If there be a wife	$15.00	If there be no wife but a child	$5.00
Wife and one child	25.00	Two children	12.50
Wife and two children	32.50	Three children	20.00
Additional per additional child	5.00	Four children	30.00
		Additional per additional child	5.00

The monthly allowance, however, shall not exceed $50.

The monthly family allowance to a former wife divorced shall be payable only out of the difference, if any, between the monthly family allowance to a wife and children and the sum of $50.

For a wife living separate and apart under court order or written agreement, or to a former wife divorced the monthly allowance, together with the allotment, if any, shall not exceed the amount specified in the court order, decree, or written agreement to be paid to her.

For an illegitimate child to whose support the father has been judicially ordered or decreed to contribute, it shall not exceed the amount fixed in the order or decree.

Following are the monthly amounts of Government allowance to the dependents above specified other than wife, child, or divorced wife:

One parent, stepparent or grandparent of yourself or wife	$10.00
Two such parents or grandparents	20.00
Each such parent or grandparent additional	5.00
Each grandchild, brother, or sister	5.00

"Grandchild" here means a child as above defined, of a child as above defined.

Note.—The amounts of the allowances to others than wife, divorced wife, and child will be paid only if they are actually dependent upon you and, added to the allotment, shall not exceed the average sum habitually contributed by you to their support monthly during the period of dependency but not exceeding a year immediately preceding your enlistment or October 6, 1917.

If any allowance is paid to wife, child, or divorced wife, the total allowance to be paid to the other stated dependents shall not exceed the difference between the total allowance paid to wife, child, and divorced wife and the sum of $50.

2—2000

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INSTRUCTIONS.

This form is for use as follows:

(a) By soldier to make request (single copy) to organization commander for clothing for either individual or bulk issues. For this purpose the original and duplicate will be detached and used indiscriminately. *When clothing is drawn individually*, the soldier's request will be preserved by the organization commander until the "duplicate" is received back from the quartermaster. *When clothing is drawn in bulk*, the soldier's request will be preserved and used for making the issue. The officer making the issue will complete the Individual Clothing Slips as prescribed in instructions on Form No. 213.

(b) By organization commander to make requisition for individual issue of clothing.

REQUISITION BY ORGANIZATION COMMANDER.

The Individual Clothing Slips will be serially numbered by each organization commander for the month or period and are made in duplicate by carbon process. The original and duplicate (not detached) will be sent to the quartermaster. The quantities and sizes desired will be entered at the organization office, except that for men not yet fitted the size may be filled in at the time of issue after proper size has been determined by try-on.

Clothing issued to the soldier and removed from the quartermaster's storehouse will not be received back by the quartermaster.

The quartermaster or his representative issuing the clothing will be held responsible that the soldier drawing the clothing is identified.

If a large number of men of an organization are to draw clothing, Individual Clothing Slips will be sent to the quartermaster in advance to permit the clothing to be prepared for issue.

At the time of issue the quartermaster or his representative will, by carbon process, enter on both copies the quantities, sizes, and unit prices of the articles issued, initial the slip, and obtain the soldier's signature on original and duplicate. A line will be drawn through each blank space in column "Quantities issued" on original and duplicate by the quartermaster or his representative before the soldier signs the receipt. The "original" will be retained by the quartermaster and the "duplicate" returned to the organization commander or his representative at the time of issue or returned at the close of the business day in a sealed envelope to the organization commander.

The original will be abstracted daily by the quartermaster on Abstract of Clothing Issued (Form No. 180), as explained on that form. A check mark will be placed in the space provided at the bottom of the slip to note the fact of entry on the abstract.

The duplicate, after having been returned by the quartermaster, will be retained by the organization commander, who will immediately determine the total money value and enter the data on Abstract of Clothing Drawn (Form No. 180) on Statement of Clothing Charged to Enlisted Men (Form No. 165b), as explained on those forms, and on the Descriptive List of the enlisted man. Check marks will be placed in the spaces provided at the bottom of the form to note the fact of entries. The abstract, statement, and duplicate slips will be kept filed together.

At the end of the month, or whenever an organization leaves the vicinity of the issuing quartermaster for an extended period, the organization commander will compare his Abstract of Clothing Drawn (Form No. 180) with the quartermaster's Abstract of Clothing Issued (Form No. 180), as explained on that form.

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TREASURY DEPARTMENT
BUREAU OF WAR RISK INSURANCE
Division of
Military and Naval Insurance
FORM 1 B

INFORMATION FOR ALLOTMENT OF PAY AND APPLICATION FOR FAMILY ALLOWANCE.

THIS FORM MUST BE FILLED OUT IN TRIPLICATE.

My full name is George (Given) Timothy (Middle) Sullivan (Last name) Sgt. 1st. Cl. Med. Dept. U.S.A. (Rank and organization)

Home address 311 Cedar Street (No. and street or rural route) Redwood City (City, town, or post office) California (State)

Place and date of birth Redwood City (City or town) California (State) 4th. (Day) July (Month) 1891 (Year) *Age* 26 (Nearest birthday)

Date of last enlistment or entry into active service April 27th. 1915 *Pay fr. United States $* 60.00

I hereby certify that the following-named persons and no other come within the class of my wife, former wife divorced, or child as defined in the Act and entitled thereunder to compulsory allotment, and that the information stated opposite their respective names is correct. (If as to any of these there is no person so related to you, write "None" in the name column.)

Relationship to Me	Age	NAME (Given) (Middle) (Last name)	POST-OFFICE ADDRESS: No. and Street or Rural Route	City, Town, or Post Office	State	DATE OF BIRTH: Month	Day	Year	MARRIED? Enter "Yes" or "No"	REMARKS (Follow Instructions)
Wife	24	Ada May Sullivan	311 Cedar St.	Redwood City	Cal.	Aug.	1	1893	Yes	---
Child	1	Don George Sullivan	311 Cedar St.	Redwood City	Cal.	May	4	1917	No.	---
Child										
Child										
Child										
Child										
Child										
Divorced wife		NONE.							Remarried? "Yes" or "No"	Amount payable monthly by order of court

I hereby make voluntary allotments in addition to compulsory allotment, if any, as follows:

Relationship to Me	NAME	POST-OFFICE ADDRESS: No. and Street or Rural Route	City, Town, or Post Office	State	Amount of My Average Monthly Habitual Contribution Because of Dependency	AMOUNT OF ALLOTMENT
Wife	Ada May Sullivan	311 Cedar St.	Redwood City	Cal.	$50.00	$ 10.00

Upon the basis of the foregoing information, which I hereby certify to be correct, I hereby apply for allowances for the following-named persons whose relationship and dependency are fully described above:

Ada May Sullivan
Don George Sullivan

Signed at (on board) Camp Stanley, Leon Springs, Texas.

The 24th. *day of* November, *191* 7.

Witnessed by: John Doe *(Sign here)* George T. Sullivan

Rank Capt. Med. Res. Corps, USA.

Commanding Camp Hospital, Camp Stanley, Tex. Sgt. 1st. Cl. Med. Dept. USA
(Rank or rating) (Organization)

See Appendix II—730a and b.

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TREASURY DEPARTMENT
BUREAU OF WAR RISK INSURANCE
Division of
Military and Naval Insurance

Form 2

APPLICATION FOR INSURANCE

POLICY NUMBER | FILE NUMBER

My full name is George Timothy Sullivan

Home address 311 Cedar Street (No. and street or rural route) Redwood City (City, town, or post office) California (State)

Date of birth July (Month) 4th. (Day) 1891 (Year) *Age* 26 (Nearest birthday)

Present rank Sgt.1st.cl.Med.Dept *Present station* Camp Stanley,Texas *Date of enlistment* Apr. 27,1915. (Month) (Day) (Year)

I hereby apply for insurance in the sum of $ 10,000 *payable to myself during permanent total disability and from and after my death to the following persons in the following amounts:*

RELATIONSHIP	NAME OF BENEFICIARY	POST OFFICE ADDRESS (a) No. and street or rural route (b) City, town, or post office and state	AMOUNT OF INSURANCE FOR EACH BENEFICIARY (In multiples of $500 only)
Wife	Ada May Sullivan	(a) 311 Cedar Street (b) Redwood City, California	$ 5,000
Child	Don George Sullivan	(a) 311 Cedar Street (b) Redwood City, California	2,500
Mother	Mary Gale Sullivan	(a) 719 Stambough Street (b) Redwood City, California	2,500
		(a) (b)	
		(a) (b)	

In case any beneficiary die or become disqualified after becoming entitled to an installment but before receiving all installments, the remaining installments are to be paid to such person or persons within the permitted class of beneficiaries as would under the laws of my place of residence be entitled to my personal property in case of intestacy.

I authorize the necessary monthly deduction from my pay, or if insufficient, from any deposit with the United States, in payment of the premiums as they become due, unless they be otherwise paid.

If this application is either for more than $4,000 insurance or is signed on or after February 12, 1918, I offer it and it is to be deemed made as of the date of signature.

If this application is for less than $4,500 insurance and in favor of wife, child, or widowed mother and is signed before February 12, 1918, I offer it and it is to be deemed made as of February 12, 1918.

If this application is for less than $4,500 and in favor of some person or persons other than wife, child, or widowed mother and is signed before February 12, 1918, I offer it and it is to be deemed made as of { Date of signature / [redacted] } **Strike out whichever is not wanted.**

NOTE.—If in the last paragraph, you strike out "Date of Signature," leaving "February 12, 1918," the law gives you $25 a month for life in case of permanent total disablement occurring prior to such date and the same monthly amount to your wife, child, or widowed mother, but nothing to anyone else in case of your death before such date, and the insurance for the designated beneficiary other than wife, child, or widowed mother is effective only if you die on or before February 12, 1918.

If you strike out "February 12, 1918," leaving "Date of Signature," a smaller insurance both against death and disability takes effect at once, but is payable in case of death to the designated beneficiary.

Signed at Camp Stanley, Leon Springs, Tex.

the 27th. *day of* November, 191 7

Witnessed by

John Doe Capt. M.R.C.

(*Sign here*) George T. Sullivan.

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An officer about to embark for service beyond the sea or already on oversea service who does not desire to dispose of his pay accounts as prescribed in paragraph 1259, may make an allotment of pay for the support of his family or dependent relatives, the difference between the amount so allotted and the total pay due to be drawn by the officer at the place where he is serving. This allotment must be in an amount less than the sum of the officer's monthly base and longevity pay, and the difference between the total pay due him and the amount allotted will be drawn at the station where he is serving on a pay account prepared to cover the total pay due with the notation: "Deduct for allotment $_____." All allotments of pay will be paid by the Depot Quartermaster, Washington, D. C., as they accrue if the casualty list, stoppage circular or other report show no bar to payment.

An officer desiring to make an allotment of pay as herein provided will state his allotment on Quartermaster Corps Form No. 38a, which will be forwarded directly to the Depot Quartermaster, Washington, D. C., if the officer is under orders for oversea duty. The Depot Quartermaster will immediately notify the chief quartermaster or department quartermaster where the officer is to serve, of the amount of the allotment and the period thereof. In cases of officers under orders to proceed to Alaska or for service with an independent brigade or division, the notification will be sent directly to the quartermaster where the officer is to serve. If the officer is at an oversea station when the allotment is made, he will forward the allotment form to the Depot Quartermaster, Washington, D. C., through the chief quartermaster or department quartermaster where he is serving, who will make record of the same. Should the allotment form not be available, the officer may make his allotment in the form of a letter reading:

Superseded.

I hereby allot $_____ of my pay per month for _____ months commencing the first day of _____ to _____ who is my _____ and whose address is _____.

Should the officer desire to have the amount of the allotment placed to the credit of his allottee with a bank, he will amplify his letter accordingly, giving the name and location of the bank. This letter should be forwarded in the same manner as is herein provided for the regular allotment form.

An officer who has disposed of his pay accounts as prescribed in paragraph 1259 and desires to substitute an allotment of pay therefor, should, in forwarding his allotment, request the return of said pay accounts. The pay accounts will be returned by the Depot Quartermaster through the proper quartermaster where the officer is serving.

Allotments of pay for purposes other than the support of families or dependent relatives or by officers stationed within the continental limits of the United States, will not be permitted except when specially authorized by the Secretary of War, but this will not be construed as requiring discontinuance of allotment of an officer who is temporarily on duty in the United States or there on leave of absence from an oversea station.

Should an officer desire to discontinue an allotment prior to the expiration of the period for which originally made, he will notify the Depot Quartermaster, Washington, D. C., specifying the date, which will be the last day of a month, on which he desires the discontinuance to take effect. This notification will be sent through the channels herein prescribed for forwarding allotments, and when practicable will be mailed sufficiently in advance of the date of discontinuance to insure receipt by the Depot Quartermaster before said date. In case there is any doubt as to the discontinuance being through the mails prior to the date specified therein, the officer, at the time of mailing the discontinuance, will notify the Depot Quartermaster by telegraph of the date of discontinuance such telegrams to be paid for by the officer The Depot Quartermaster will acknowledge the receipt of all requests for discontinuance of allotments

See Appendix II—732a.

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Q. M. C. Form 38a

OFFICERS' ALLOTMENT OF PAY

(To be executed and forwarded in duplicate as indicated in Note 1)

Fort McPherson, Ga., Feb. 10, 1918
(Place) (Date)

I hereby allot $ 150.00 of my pay per month for the period of 12 months, commencing the first day of March, 1918, and expiring the last day of February, 1919, to Elsa Jane Doe, who is my wife and whose
(Allottee) (Relationship)

address is 344 Fourth Street, Philadelphia, Penn.
(Complete Post Office address)

Place the amount of this allotment to the credit of my allottee with (See Note 2) The City Trust Co., Philadelphia, Pa.

Notation of the amount allotted will be made by me on my monthly pay accounts during the period of this allotment.

(Signed in duplicate) John Doe, Major, M. C.
(Name) (Rank)

Note 1.—If under orders for oversea duty this allotment will be sent directly to the Depot Quartermaster, Washington, D. C. If already at oversea station, it will be sent to the Depot Quartermaster, Washington, D. C., through the chief quartermaster or department quartermaster, where officer is serving, who will make record thereof.

Note 2.—Officer will insert name and location of bank if he desires the amount placed to the credit of the allottee with a bank.

.....
(See Note 1)

_____, _____ 191
(Place) (Date)

Noted and made of record.

_____; _____
(Name) (Rank)

Office of Department or Chief Quartermaster.

See Appendix II—733a.

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WAR DEPARTMENT.
Form No. 336.
Form approved by the Comptroller of the Treasury May 5, 1915.

WAR DEPARTMENT
QUARTERMASTER CORPS

Voucher No.

OFFICER'S PAY VOUCHER.

APPROPRIATION: PAY, ETC., OF THE ARMY, 191 *Symbol*

THE UNITED STATES,

TO John Doe

Captain, M. R. C. U. S. ARMY, DR.

For over ..... years' service. Station Base Hospital No. 26 Fort McPherson, Ga., Zone No. .....

OBJECT SYMBOL.		AMOUNT. DOLLARS.	AMOUNT. CTS.	U. S. NOTATIONS.
	Deduct for allotment $50.00; deduct for insurance premium - $7.10; deduct for 2nd L.L. $20.00 to Federal Reserve Bank; deduct for 3rd L.L. $30.00 to Secretary Treasury; deduct for allotment for private insurance premium $38.09			
	For pay from April 1, 1918, to April 30, 1918			
	For pay for ..... mount from ....., 191..., to ....., 191..			
	I was suitably mounted at my own expense, and was the actual and exclusive owner of the mount charged for, during the period stated on this voucher, and said mount {was / were} maintained at ..... (Officers temporarily mounted must make the additional certificates required by par. 1278, A. R., 1913.)			
	For com. quarters from April 1, 1918, to April 30, 1918			
	For com. heat and light for 4 rooms from April 1, 1918, to April 30 1918			
	(Under authority of S. O. No. 100, Hdqrs. S.E.D., Feb. 21, 1918.)			
	Six months service: Total			
	On {ordinary / sick} 20 ds leave of absence. Left station April 3, 1918 under S. O. No. 170 Hdqrs. Gen. Hosp. No. 6, Ft. McPherson, Ga., April 2, 1918.			
	Extended by S. O. No. ..... Hdqrs. ....., 191...			
	Returned to duty April 23, 1918. Deduct half pay for 5 days' leave of absence,			
	Balance			

I CERTIFY that the foregoing account is correct; that payment therefor has not been received; that I have not been absent on leave, either sick or ordinary, during the period covered by this voucher, except as above stated; and that neither I, my family, nor anyone dependent upon me has occupied public quarters, nor been furnished heat or light by the United States during the period for which commutation is charged.

I further certify that during the period for which commutation of heat and light is charged I actually occupied as quarters at 115 Peachtree Street, Atlanta, Ga., 4 rooms, exclusive of baths, closets, halls, pantries and storage rooms, and of parlors, lobbies, dining rooms, sitting rooms, halls and kitchens used in common with other tenants or guests (not guests of officer's family); and that during the period of leave, as stated above, said quarters were occupied actually and exclusively by myself, or self and family, or some one dependent upon me.

EXAMINED BY

John Doe

(DO NOT sign in duplicate.)

Captain, M. R. C.

Deduction on account of Income Tax, $.....

Balance of $..... paid by ..... check dated ....., 191 , on the Treasurer U. S.

No. ....., in favor of ....., for $.....

No. ....., in favor of ....., for $.....

No. ....., in favor of ....., for $.....

OR

(To be completely filled in before signature by payee, and no alteration or erasure is permitted.)

Received ....., 191 , of .....

Quartermaster, U. S. A., in cash ..... 100 Dollars, in full payment of the above account.

$

(DO NOT sign in duplicate.)

.....

.....

Officer will not sign receipt except when payment is to be made in cash.

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Form No. 536.

*Pay Voucher No.*_____

WAR DEPARTMENT,

QUARTERMASTER CORPS.

APPROPRIATION:

PAY, ETC., OF THE ARMY, 191

Amount, $_____

IN FAVOR OF

_____

(Name of payee.)

FOR PERSONAL SERVICES,

OFFICER'S PAY.

ACCOUNTS OF

_____

(Name of disbursing officer.)

_____

(Official designation.)

_____

(Place where located.)

_____

(Period for which voucher is rendered.)

Place to my credit with_____

_____

_____

_____

_____

Transferred this_____day of_____

191 , to_____

_____

_____

and the Department Quartermaster at_____

_____has been so notified.

_____

_____

NOTE.—For instructions pertaining to the transfer of, or the placing of, a part or all of an army officer's pay account to his credit with a bank or individual, see paragraphs 1258 and 1259, A. R., 1913.

INSTRUCTIONS.

1. Where an officer and his family occupy rooms it will be considered that such rooms are occupied exclusively by himself.

2. Rooms used in common with others and not under exclusive control of the officer, such as public parlors, lobbies, dining rooms, sitting rooms, halls, and kitchens, can not be considered rooms exclusively occupied; nor can halls, closets, pantries, storage and bath rooms be considered rooms.

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APPENDIX II

10a

RESTRICTION ON SALE OF CLOTHING TO OFFICERS

GENERAL ORDERS 22. WAR DEPARTMENT, MARCH 2, 1918.

III. 1. Orders heretofore restricting the sales of clothing and equipage to officers are hereby rescinded, except as to sales of woolen coats and breeches.

2. Sales will be permitted only when articles are available and not needed for immediate issue to enlisted men. These sales shall not exceed the amount of equipment C.

(420 A.G.O.)

Spiral Puttees for Troops in France.—Spiral puttees are supplied to the troops of the U. S. Armies in France. These puttees are issued as needed to companies actually serving in the trenches. When woolen spiral puttees are issued to an organization they are not to be used for habitual wear, but a specific period of not to exceed ten days will be prescribed during which period the men in the organization are required to wear the spiral puttees for instruction purposes. After this period they will be turned in and issued only to such members as are ordered forward to service in the trenches. Spiral puttees are not worn by officers or enlisted men except for instruction purposes as above indicated. Army and Navy Jr., Apr. 20, 1918.

15a

OVERSEA CODE ADDRESS

For Cablegrams to Families and Business Connections of Military and Naval Personnel Serving Abroad.

Any person detailed to duty overseas in the military or naval forces, wishing to cable a member of his family, or partner, or other business connection in the United States in plain English should request authority through his commanding officer to have his address codeword registered with the Cable Censorship. These requests should be forwarded direct to the Cable Censor, 20 Broad St., New York City, for record and registration. Requests from members of families, etc., will also receive attention if addressed to the Cable Censor in New York.

The codeword must consist of not more than ten letters and must be pronounceable. In addition, the full translation of the telegraphic address of the person for whom the cablegram is intended must be given the Cable Censor in making application; also the family or business relationship. Not more than one address will be authorized for each person in the military or naval service oversea.

In case the codeword chosen has not already been registered by another person, it will be registered as requested. If not acceptable for any reason, the applicant, or his correspondent, will be advised, and it will then be necessary to offer a new codeword.

All cablegrams will be addressed "Censor, Newyork" and the registered codeword will follow next as the first word of the message.

All such cablegrams must be prepaid to New York. They will be accepted from the cable companies by the New York Censor and will be put on the land telegraph lines, with the registered telegraphic address translated from the registered codeword, and forwarded "collect."

Cablegrams in both directions must be restricted to cases of dire necessity, where they will provoke effective action.

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15b

Cable Address of Members of American Oversea Expeditionary Force.

A prescribed form of address for cable messages to members of the American Oversea Expeditionary Force has been announced by the War Department, which must be followed to insure delivery.

The cablegram should be addressed, "Amexforce, London," with the addressee's name and the official designation of the unit to which he belongs appearing as the first words of the text.

For example:

"Amexforce, London
H. K. Smith, Company K,
Forty-seventh United States Inf.
Will not change address.
Jane Smith."

Cablegrams conveying affectionate messages and conveying reports of birth, death, and kindred information, will have slight chances being sent on account of the abnormally heavy traffic on the cables. This rule will be adhered to rigidly and without exception in cases where no good could come from, or where mental distress might be caused by, such cablegrams. Each sender of a message should study it with the above in view before filing it.

15c

Reservation of Space on Transport

A letter from the Adjutant General's Office, dated April 9, 1918, reads as follows:

"To enable authorities at Ports of Embarkation to reserve the proper amount of space on Army Troop Transports, it is essential that officers called upon to furnish a statement of the amount of baggage accompanying troops, exercise the greatest care in furnishing such information. In order that no vacant space may exist at the time of sailing, Port authorities are required to assign such additional cargo as may be needed to completely load troop transports after all equipment has been placed aboard. Unless the weight and measurements given by organization commanders when called upon by the Port authorities is correct, it results in additional cargo being stowed over troop property, thus causing delay in discharging of troops and their property upon arrival abroad."

16a

Bulletin
No. 2

WAR DEPARTMENT
WASHINGTON, JANUARY 25, 1918.

The following is published to the Army for the information and guidance of all concerned:

List of arms, equipment and clothing which should be in the possession of an officer for field service in France, based on the Table of Fundamental Allowances, quartermaster supplies; Uniform Regulations; and circular of information from headquarters, American Expeditionary Forces, dated November 16, 1917.

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16b

Articles	Number	Remarks
Basin, canvas	1	Sold, not issued to officers.
Bedding roll or combination bedding-clothing roll.	1	do
Belt, saber, garrison	1	do See par. 65, S.R. No. 41 (U.R.) Circular, headquarters, American Expeditionary Forces, states: "In addition to the prescribed field belt, the Sam Browne belt with single sling will be needed by all officers. The proper type may be obtained in France." Also see sec. 1, Bul. No. 70, W. D., 1917. *Note.*—The "Sam Browne" or "Liberty" belt is not authorized to be worn in this country.
Belt, waist	1	Sold, not issued to officers.
Blankets, olive drab	4	Sold, not issued to officers. This is number given in Circular, headquarters, American Expeditionary Forces.
Boots, rubber, hip	1	Sold, not issued to officers. Circular, headquarters American Expeditionary Forces.
Breeches, woolen, pairs	2	Circular, American Expeditionary Forces, states clothing should include heavy and medium weight. Sold to officers.
Bucket, canvas	1	Sold, not issued to officers.
Canteen, with cover and strap	1	Issued by ordnance depot on memorandum receipt.
Cap, service	1	Circular, American Expeditionary Forces. Sold to officers.
Chair, camp	1	do
Clothing roll	1	Sold, not issued to officers. Not required when combination bedding-clothing roll is used.
Coats, service, woolen	2	Circular, headquarters American Expeditionary Forces, states clothing should include heavy and medium weight. Sold to officers.
Collars, linen, white	12	Circular, headquarters American Expeditionary Forces. Sold to officers.
Comfortable	1	do
Compass	1	Sold to officers. Headquarters circular, American Expeditionary Forces, suggests illuminated dial.
Cot	1	Sold not issued to officers.
Cuffs, linen, white, pairs	6	Circular, headquarters American Expeditionary Forces. Sold to officers.
Cup	1	Issued by Ordnance Depot on memorandum receipt.
Drawers, pairs	4	Sold: circular, headquarters American Expeditionary Forces, states heavy wool and cotton.
Field glass	.....	Sold by Signal Corps; not issued to officers.
First-aid packet with pouch	1	Packet supplied by Medical Department, pouch by Ordnance Department.

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16c

Articles	Number	Remarks
Flashlight and extra batteries....	1	Circular, headquarters American Expeditionary Forces.
Fountain pen, paper and envelopes	1	do
Gloves, riding, pair.....	1	Sold, headquarters American Expeditionary Forces, circular.
Gloves, woolen, olive drab, pair..	1	Sold, not issued to officers.
Handkerchiefs.....	12	Sold; a number should be of olive drab color.
Hat, service, hat cord sewed on...	1	Sold; not issued to officers.
Haversack with pack carrier.....	1	Containing meat can, knife, fork and spoon. Obtained from Ordnance Depot on memorandum receipt.
Laces, shoe, extra, pairs.....	4	Sold; not issued to officers.
Lantern or lamp.....	1	For oil or gasoline; circular headquarters American Expeditionary Forces. Sold to officers.
Leggins, russet leather, pigskin, pair.	1	Sold, not issued to officers.
Lockers, trunk.....	1	do
Moccasins, pair.....	1	Reaching to ankle; large enough to wear two pairs of stockings worn in rubber boots; circular headquarters American Expeditionary Forces; sold to officers.
Notebook, and pencils.....	1	Sold; not issued to officers.
Overcoat, olive drab.....	1	do Commanding officers may authorize *in the field only* a short double-breasted overcoat. (See Par. 103, S.R., No. 41, U.R.): Officers may wear waterproof capes or overcoats, as nearly as practicable the color of the service uniform, when on duty involving exposure to rainy or other inclement weather. (See Par. 126, S.R. No. 41, U. R.). In France the overcoat is worn of knee length. Circular headquarters American Expeditionary Forces states it is desirable to have the overcoat wool lined. (See "Slicker.")
Overshoes, Arctic, pair.....	1	Circular headquarters American Expeditionary Forces.
Pistol, with holster.....	1	Issued in France; not issued in United States to officers not serving with troops.
Pistol belt.....	1	do
Portfolio, leather.....	1	For officers habitually carrying papers; sold.
Saber and scabbard.....	1	Circular headquarters American Expeditionary Forces states required only by Cavalry officers on duty with troops armed with the saber; sold; not issued.
Saber knot.....	1	Sold; not issued to officers. (See remark above concerning wearing of the saber in France.)
Shelter tent, complete.....	1	Issued on memorandum receipt by Quartermaster Department.
Shirts, flannel, olive drab.....	2	Sold; not issued to officers.
Shirts, cotton, olive drab, or linen..	6	Sold; Circular headquarters American Expeditionary Forces.

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16d

Article.	Number.	Remarks.
Shoes, high, russet leather.....	2	Sold; not issued to officers. Circular headquarters American Expeditionary Forces, states that 2 pairs of shoes are required for wear inside Arctic overshoes; and also the following are required: 2 pairs very heavy hobnailed field shoes, or trench boots, large enough to take heavy wool stockings. These boots should be laced in instep, and such boots may be worn by all officers at all times. Those laced all the way up are authorized, but in cities they may be worn only in inclement weather. Mounted officers may wear boots of russet leather. (See Par. 67, S.R. No. 41, U.R.)
Slicker.....	1	Sold; not issued to officers. Circular, headquarters American Expeditionary Forces. "It is advised that slicker have a detachable lining of heavy wool or fleece. The overcoat or raincoat (slicker) for officers in the trenches should be of same appearance as those worn by men. The English trench coat is satisfactory, provided it can be obtained. It answers the combined requirements of overcoat and raincoat, and has a lining that can be worn separately." *Note.*—A trench coat very similar to the one above described is manufactured by Adler Bros. & Co., of Rochester, N. Y., and one is on sale at the Army and Navy coöperative stores. It is thought there are several manufacturers who make them. Correspondence with the depot quartermaster, New York, will secure names of possible manufacturers.
Stockings, pairs.....	6	Sold; not issued to officers. Circular, headquarters American Expeditionary Forces, states that cotton and heavy wool underwear are required, and particularly indicates that heavy-weight wool stockings are needed. To meet these requirements the number indicated should be increased; at least doubled.
Tag, identification.....	2	Sold; not issued to officers.
Tape, for identification tag, yard	1	do
Toilet articles.....	.....	Including brushes, hair and tooth, comb, razor, and soap. Sold; not issued.
Toque, knitted.....	1	Circular, headquarters American Expeditionary Forces.
Towels.....	6	Including bath towels; sold.
Tub, canvas or rubber.....	1	For sponge bath. Circular, headquarters American Expeditionary Forces.

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16d

Article	Number	Remarks
Undershirts	4	Sold, not issued to officers. Circular, headquarters American Expeditionary Forces, states that cotton and heavy wool underwear are required, so this number should be at least doubled.
Vest, leather or flannel	1	Circular, headquarters American Expeditionary Forces.
Watch	1	Sold to officers by Signal Corps.
Whistle	1	Issued by quartermaster on memorandum receipt.

Mounted officers should provide themselves with spurs. Until the new model mounted equipment is available in quantity, mounted officers are authorized to obtain horse equipment from the Ordnance Department on memorandum receipt. Officers not serving with troops should obtain this horse equipment after arrival abroad.

The depot quartermaster in New York will furnish, on application, officers with a list of manufacturers of clothing and equipment.

Upon request of officers the manufacturers on such list will forward to them a price list, and will deliver clothing and equipment to officers ordering same, collecting from the officers the wholesale prices for the articles furnished.

(062.1, A.G.O.)

By order of the Secretary of War:

JOHN BIDDLE,
Major General, Acting Chief of Staff.

Official:
H. P. McCAIN,
The Adjutant General.

16e

COTTON UNDERWEAR FOR OVERSEA FORCES

The recommendation of the Commanding General, American Expeditionary Forces, that cotton underwear be provided for summer wear in France is approved. Previous instructions prescribing the wear of light woolen underwear, by troops embarking from May 1st to September 30th, for overseas service, are rescinded.

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17a

a-A. Jr. 5/9/18.

ADVICE AS TO BILLETS IN FRANCE

The following official memorandum will be of interest to officers and men who are to go to France:

"The attention of every officer is directed to the importance of preventing any damage whatever to property belonging to the French. When any damage is done the matter should be adjusted and settlement made on the spot, no matter how small. It will save you trouble explaining in the future.

"When billets have once been assigned, changes cannot be made without authority of the town major. All information may be obtained from local town major. One-half franc per day is the customary rate to pay for personal service. It is important that all officers be careful not to leave without making settlement.

"No matter how long an officer stays in a billet, he would do well to pay for service at the rate of fifty centimes a day. Failure to do this gives rise to unfavorable comment on the part of the inhabitants, who are then less inclined to billet officers. The French authorities can, of course, force the inhabitants to billet officers, but the way is smoother for all concerned if officers are appreciative and give some outward and visible sign of inward appreciation.

"The respecting of private property is of capital importance. Officers and men should be careful, too, not to offend the French people, who are quite sensitive. Altercations should be avoided. Most matters can be adjusted in a few minutes with the aid of an interpreter. It should be remembered that the billeting is actually handled by the French, who should be consulted by anyone who is not sure of his ground. The proper procedure is to refer the matter to the American Town Major, who will take it up with the French authorities.

"According to the French law, the inhabitants receive pay for billeting officers and men only when they have stayed more than three nights in the same month. It is only fair then in the interests of all that an officer who is billeted for fewer than four nights should reimburse the proprietor to the extent that the proprietor would have been paid by the government, *i.e.*, one franc per night. It is the custom to add to this a fee for service at the rate of fifty centimes a day. This may be paid to the person actually performing the service of cleaning, making beds, etc., or to the proprietor.

"Men must be cautioned that they must not touch any wood, box, or any property no matter how small or seemingly unimportant without first obtaining permission. The rustling of lumber, wood, etc., as is customary for soldiers in the United States, must not be permitted, as it will not be tolerated in France.

"It is important that all instructions of the French officials be followed explicitly. Also that the conduct of officers and men be such that the French people will have no cause for complaint. It has been found that the

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treatment accorded our troops has generally been based on the conduct of the troops who were last to occupy the town. When in doubt on any question consult the French town major, through the American town major."

17b

MISCELLANEOUS INFORMATION

Commander of the Port—Army Pier No. 1, Hoboken, N. J.
Telephone—Hoboken 3000.

His office is reached by taking a Hoboken train in the Hudson Tunnels and getting out at Hoboken, which is the last stop. The Hudson tunnel stations on the New York side of the Hudson River (or North River, as it is familiarly known) are:

33d Street and Sixth Avenue.
28th Street and Sixth Avenue.
23d Street and Sixth Avenue.
18th Street and Sixth Avenue.
14th Street and Sixth Avenue.
9th Street and Sixth Avenue.
Christopher Street.

The downtown station is at the Hudson Terminal Building, corner of Cortland and Church Streets. The fare from the uptown stations to Hoboken is seven (7) cents; from the downtown station, five (5) cents.

The depot quartermaster.—No. 39 Whitehall Street, New York. Telephone.—Broad 7500.

Hoboken branch, Army Transport Service (passenger department), No. 95 River Street, Hoboken, N. J.

19a

COMMUTATION OF QUARTERS

"Act approved April Sixteenth, Nineteen Hundred Eighteen, provides: That during the present emergency every commissioned officer of the Army of the United States on duty in the Field, or on active duty without the territorial jurisdiction of the United States, who maintains a place of abode for a wife, child, or dependent parent, shall be furnished, at a place where he maintains such place of abode, without regard to personal quarters furnished him elsewhere, the number of rooms prescribed by the Act of March Second, Nineteen Hundred and Seven, Thirty-fourth Statute, Page Eleven Hundred and Sixty Nine, to be occupied by and only so long as occupied by such wife, child, or dependent parent, and in case such quarters are not available every such commissioned officer shall be paid commutations thereof and commutation of light and heat at the rate authorized by law in cases where public quarters are not available, but nothing in this Act shall be so construed as to reduce the allowances now authorized by law for any person in the Army." Said Act will be presented to the Comptroller Treasury for interpretation. *No claims for payments thereunder should be presented or paid until further instructions.*

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23a

GLOVES FOR ENLISTED MEN

The following letter was published by the Adjutant General Office under date of April 20, 1918.

1. Gloves and mittens are approved for issue to enlisted men as indicated below, the Table of Fundamental Allowances being amended accordingly; Leather Mitten, one finger (unlined), one pair to each enlisted man for wear in overseas service.

(Woolen Gloves, olive drab (old specifications), to be worn inside unlined.) (Leather Mitten, one pair for each enlisted man for winter wear in oversea service.)

Canton Flannel Mitten, one finger, leather palm (unlined), one pair for each enlisted member of a dismounted or motorized organization, except aviators and those individually mounted. For wear in the United States.

Gloves, Canton Flannel, leather palm (unlined), one pair for each enlisted man of a mounted organization and for each member of a dismounted organization who is individually mounted. For winter wear in the United States.

Gloves, Jersey Knit, one pair for each enlisted man in the United States for winter wear with Canton Flannel Mitten, one finger, unlined and with Gloves, Canton Flannel, leather palm, unlined.

Gloves, Heavy Leather, for issue both in United States and overseas service to

(*a*) Each enlisted member of the Ordnance Dept.
(*b*) Each enlisted member of the Signal Corps.
(*c*) Each enlisted member of the Engineer Corps.
(*d*) Each enlisted member of the Machine Gun Companies.
(*e*) Each enlisted member of the Stevedore and Supply Companies.
(*f*) Each enlisted member of the Labor Units
(except Butchery, Laundry and Bakery Companies.)

When not provided with other glove equipment, to the following:

(*g*) Each enlisted member of a Mounted Organization.
(*h*) Each enlisted member of an Artillery.
(*i*) Each enlisted member of a Motorized Unit.
(*j*) Each enlisted member of Wagon Companies and Pack Train Co.

2. The instructions herein contained supersede all prior instructions on the subject of gloves, except gloves for aviators and for service in Alaska.

3. So much of Special Regulations No. 41, Uniform Regulations, 1917, and Special Regulations No. 42, Uniform Specifications, 1917, as are in conflict with the above are, during the present emergency, hereby suspended.

A–526.

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23b

ISSUE KEPT AT A MINIMUM

The Secretary of War directs that, owing to the increased military program, clothing in the hands of troops must be kept at a minimum. Until further orders no replacements will be made when the amount of clothing per man exceeds the following articles:

1 cotton coat	1 hat
2 breeches	1 pair leggins
2 suits underwear	2 blankets
3 pairs socks	1 belt
2 outer shirts either cotton or flannel	1 barrack bag
2 pairs shoes	

These instructions will not apply to troops placed on priority list for overseas service.

CLOTHING RECORDS

1. When articles of clothing and equipment are issued to an enlisted man they will be entered in the "issue" column, Form 637 A.G.O., with the date of issue entered in figures (*e.g.*, 10/30/17) on the date line. The column will be initialed by the witnessing officer and, except in the case of issue of clothing, by the soldier, a line being drawn through each blank space in the column by the witnessing officer. When articles are first issued to an enlisted man the sizes that have been determined to be the proper ones will be entered in column headed "sizes."

2. When articles are turned in, lost, or destroyed, they will be entered in one of the columns provided for the purpose, as in case of issues. The officer who receives the articles or records the charge on the pay roll for articles lost or destroyed (Pars. 685, 686, A.R.) will initial the column, drawing lines through the blank spaces as indicated in Par. 1.

3. When an individual equipment record form is filled a new one will be started and the old record retained with the individual clothing slips (Q.M.C. Form No. 165) pertaining thereto, until the next inspection by an inspector, after which all filled individual equipment records and clothing slips may be destroyed. When a new equipment record is started the number of articles transferred will be entered in first issue column of new record, and the column initialed as prescribed in Par. 1.

4. No record will be made of a transaction where an article is turned in and replaced by a like article at the same time.

5. When a soldier is transferred or detached from his company the word "canceled" will be written in columns showing articles issued and turned in to date. The articles which the soldier carries with him, or for which he is indebted to the United States, will then be entered in the next issue column; the column being initialed by the soldier and witnessing officer, as prescribed in Par. 1. These articles, except clothing and individual mess equipment,

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will be entered on Form No. 600, A.G.O., as required by Par. 681–O, A.R. The individual equipment record will be forwarded with the service record to the soldier's new commanding officer.

26a

IDENTIFICATION TAGS

(*a*) Two aluminum identification tags, each the size of a silver half dollar and of suitable thickness, stamped with the name, rank, regiment, corps or department of the wearer in the case of officers, and with the name and Army serial number in the case of enlisted men, will be worn by each officer and enlisted man of the Army whenever the field kit is worn; one tag to be suspended from the neck underneath the clothing by a cord or thong passed through a small hole in the tag, the second tag to be suspended from the first one by a short piece of string or tape. These tags are prescribed as a part of the uniform, and when not worn as directed herein will be habitually kept in the possession of the owner. The tags stamped as herein provided will be issued to enlisted men as soon as practicable after enlistment or reënlistment, or after entry into active service in the case of reservists.

27a

DECEASED SOLDIER'S PROPERTY

The person named in the emergency address is not necessarily the legal representative of a deceased soldier under A.R. 163. The term "legal representative," as used in A.W., 112 and A.R. 163, means the duly authorized legal personal representative of the deceased; that is, an executor or administrator duly appointed by the proper court. A.W. 112 and A.R. 163 to 166 prescribe the manner of disposition of the personal effects of a deceased soldier, under which the legal representative or widow, if present, may be permitted to take charge of such effects, and if there is no legal representative or widow present the commanding officer shall cause the effects to be secured and converted into cash. It is not now permissible, as it was under Article 127 of the old Articles of War, to send the personal effects of a deceased to the legal representative or to the widow. If, however, in any case the legal representative or widow, who cannot be present, desires any particular articles of the deceased soldier's effects, it is permissible for the Summary Court, to sell such articles to such legal representative or widow, pursuant to A.W. 112, and transmit the same at the expense of such purchaser. (Ops. J.A.G., 220.8, Feb. 7, 1918.)

29a

DISCHARGE ON ACCOUNT OF DEPENDENT RELATIVES

1. A letter from the Adjutant General's Office, Washington, Jan. 22, 1918, states that certain officers, within their respective commands, have the authority to take final action on all applications for discharge on account of dependent relatives.

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2. The application must be submitted by the soldier himself, and no soldier will be discharged until his case shall have been thoroughly investigated and evidence produced to show that actual suffering exists or will result by reason of his retention in the service. Sections 71–76, Selective Service Regulations, will be considered in connection with investigations in such cases.

3. In view of the liberal provisions of the War Risk Insurance Act, it is believed that necessity for discharge on account of dependent relatives will rarely occur.

4. Attention of all concerned is invited to Section 177, Selective Service Regulations.

5. These instructions are applicable to all soldiers in the service and previous instructions conflicting herewith are rescinded.

29b

REPORTS TO BE MADE ON DISCHARGE OF ENLISTED OR DRAFTED SOLDIERS

GENERAL ORDERS 29. WAR DEPARTMENT, MARCH 26, 1918.

Section III, General Orders, No. 2, War Department, 1918 is rescinded and the following substituted therefor:

1. When a voluntarily enlisted man of draft age is discharged from the Army the officer who discharges him will immediately notify the Adjutant General of the State concerned of the fact of such discharge, giving the man's name, home address, and place and date of discharge from the service, and stating that he was voluntarily enlisted.

2. When a selected man of draft age is discharged from the Army, at any time after he has been accepted and his enlistment and assignment card has been furnished to the Adjutant General of the Army, the officer who discharges him will prepare and mail Forms 1029, C. and D., P.M.G.O. for the selected man so discharged.

In preparing these forms, when the necessary data is not found on the man's service record, and it cannot be secured otherwise; it may be obtained from the man's registration card on file at the headquarters of the place of mobilization of the man in question.

(220.81, A.G.O.)

30a

DISLOYAL OFFICERS AND SOLDIERS

In all cases where officers and soldiers in the Army of the United States demonstrate by their conduct or speech disloyalty to the Government of the United States and sympathy with its enemies the following general policy is recommended:

(*a*) In the case of any officer or soldier who has by his speech or conduct demonstrated an attitude or committed an act of disloyalty, it is recom-

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mended that he be brought to trial by a general court-martial as promptly as possible whenever the necessary data can be obtained as a basis for charges.

(*b*) If suitable data for such charges cannot be obtained, it is recommended that a suspected officer be dismissed or discharged, under the authority of the particular statute which may apply in his case, and that a suspected enlisted man be discharged from the service.

(*c*) If any such officer so dismissed or discharged, or any such enlisted man so discharged, from the service, be found to be an alien enemy of the United States, it is recommended that he be promptly interned for the period of the war, and if he be a citizen of the United States or an alien, not an alien enemy, that he be promptly reported to the civil authorities for surveillance and for such action as may be found possible to take against him under the authority of existing law or of any statute hereafter enacted by Congress. (Ops. J.A.G. 250.45, Dec. 8, 1918.)

31a

DATA ON CHARGE SHEETS

GENERAL ORDERS 10. WAR DEPARTMENT, JANUARY 30, 1918.

V. Hereafter in all court-martial proceedings the charge sheet shall show, in addition to the matters called for on Form No. 594, A.G.O., the amount of compulsory allotment made by the accused to dependent relatives of class A, war-risk insurance act, the amount of voluntary allotment made by the accused to dependent relatives of class B, war-risk insurance act, and the amount allotted by the accused for the payment of premiums for war-risk insurance. Until amended charge sheets are printed and distributed, the additional information herein required shall be inserted in writing on first page of Form No. 594, A.G.O., after data as to the current enlistment of the accused.

STATEMENT OF SOLDIER'S MENTAL RESPONSIBILITY

Whenever general court charges are preferred against an enlisted man, a statement from the man's Company Commander as to his opinion of the mental responsibility of the offender, also a statement of the surgeon for the organization to which the man belongs, based on personal examination of the man, as to the mental condition of the accused, both with regard to mental diseases and mental defectiveness, will accompany the statement of testimony to be expected from witnesses.

31b

TRAVEL BY RAIL OF SMALL DETACHMENTS

GENERAL ORDERS 13. WAR DEPARTMENT, FEB. 8, 1918.

VI. During the period of the present emergency the provisions of Pars. 1223 to 1233, inclusive, Army Regulations, 1913, in so far as they relate to travel by rail in the United States of enlisted men, in small detach-

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ments, traveling under orders, are modified as indicated below. In the modifications of regulations herein below prescribed it shall be understood that the provisions of these modifications do not apply to recruits, recruiting parties, or applicants for enlistment.

When a detachment of one, two, or three enlisted men is traveling under orders, where the journey, under normal conditions of traffic, is of 12 hours' duration and not exceeding 24 hours, there shall be paid to each enlisted man one day's commutation of rations at the rate of $1.50 per diem.

Where the journey, under normal conditions of traffic, exceeds 72 hours, there shall be paid to each such enlisted man, in addition to commutation of rations for the number of days usually required for the journey, two days' commutation at the rate hereinbefore prescribed.

When a detachment of more than three enlisted men is traveling under orders, travel rations will be issued, extra rations for one or two days being issued under the conditions hereinbefore set forth.

In travel by rail, in the United States, of small detachments of recruits, recruiting parties, or applicants for enlistment, where such travel is performed under orders, the provisions of Pars. 1223 to 1233, inclusive, Army Regulations, 1913, as modified below, will continue to govern.

In all cases of travel, under orders, of small detachments of recruits, recruiting parties, or applicants for enlistment, whatever may be the method of providing subsistence, extra rations for one day (or commutation thereof, if commutation is paid) will be furnished when the journey exceeds 24 hours, but does not exceed 72 hours. Extra rations for two days (or commutation thereof, if commutation is paid) will be furnished when the journey exceeds 72 hours.

The travel order will, in every case, be indorsed to show the number of days for which rations have been issued or for which commutation has been paid. Where rations are issued, the unused rations, if any, will, upon arrival at destination, be turned over to the quartermaster.

(430.26, A.G.O.)

37a

The following letter is quoted:

In future correspondence on this subject refer to (Miscl. Div.)

WAR DEPARTMENT,
THE ADJUTANT GENERAL'S OFFICE,
WASHINGTON.

FEBRUARY 15, 1918.

From: The Adjutant General of the Army.

To: All Department and Division Commanders, Commanding Officers of Excepted Places, and Chiefs and Bureaus.

Subject: Offic al Correspondence.

1. In order to expedite the record work of this office, all communications, whether mail or telegraphic, addressed to this office, which are in answer to or relate to prior correspondence on file in this office, w ll, whenever possible,

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refer to the office mark and date of the prior correspondence, viz.: "A.G. 210.2 East. Dept. Off., Jan. 12, 1918;" "A.G., 220/2 Camp Devens, E.M., Jan. 12, 1918;" A.G. 320.2 Ft. Riley, Misc., Jan. 12, 1918." This office mark includes the classification number and indicates the division of this office in which prior action was taken.

2. In all offices of record in which it is necessary to make a record of a communication bearing the office mark of this office, a notation of same, with date, will be made for future reference.

3. You will direct all under your command to comply fully with these instructions. By order of the Secretary of War:

PAUL GIDDINGS,
Adjutant General.

A recent order requires that all copies of a letter be signed by the typewritten name of the officer emitting it, and that, above his name on the first copy be placed his written signature.

44a

Distinguished-service cross, distinguished-service medal, war-service chevrons, and wound chevrons.

GENERAL ORDERS, W. D., No. 6 JANUARY 12, 1918.

1. By direction of the President the following decorations and insignia are authorized:

(*a*) Distinguished-service cross.

A bronze cross of appropriate design and a ribbon to be worn in lieu thereof, to be awarded by the President, or in the name of the President by the commanding general of the American Expeditionary Forces in Europe, to any person who, while serving in any capacity with the Army, shall hereafter distinguish himself or herself, or who, since April 6, 1917, has distinguished himself or herself by extraordinary heroism in connection with military operations against an armed enemy of the United States under circumstances which do not justify the award of the medal of honor.

(*b*) Distinguished-service medal.

A bronze medal of appropriate design, and a ribbon to be worn in lieu thereof, to be awarded by the President to any person who, while serving in any capacity with the Army, shall hereafter distinguish himself or herself, or who, since April 6, 1917, has distinguished himself or herself by exceptionally meritorious service to the Government in a duty of great responsibility in time of war or in connection with military operations against an armed enemy of the United States.

(*c*) War-service chevrons.

A gold chevron of standard material and design, to be worn on the lower half of the left sleeve of all uniform coats, except fatigue coats, by each officer and enlisted man who has served six months in the zone of the advance in the war, and an additional chevron for each six months of similar service thereafter. Officers and enlisted men of the Aviation Service on

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44b

combat-flying duty in Europe will be credited for the war-service chevron with the time they may be on that duty.

(*d*) Wound chevrons.

A gold chevron of pattern identical with that of the war-service chevron, to be worn on the lower half of the right sleeve of all uniform coats, except fatigue coats, by each officer and enlisted man who has received, or who may hereafter receive, a wound in action with the enemy which necessitates treatment by a medical officer, and an additional chevron for each additional wound; but not more than one chevron will be worn for two or more wounds received at the same time. Disablement by gas, necessitating treatment by a medical officer, shall be considered to be a wound within the meaning of this order.

2. During the present emergency, whenever a recommendation for the award of the medal of honor reaches the commanding general of the American Expeditionary Forces in Europe he is authorized to cable his recommendation for immediate action and to hold the papers until a reply is received. In the event that his recommendation is approved, he will note the action taken in his indorsement when forwarding the papers in the case and will present the medal to the recipient as the representative of the President, or will delegate a suitable officer to act in that capacity.

In any case where the person recommended for the award of the medal of honor is at the time of the recommendation apparently fatally wounded or so ill as to endanger his life, the commanding general of the Expeditionary Forces in Europe is authorized to act immediately upon the recommendation as the representative of the President, afterward reporting his action by cable.

3. Whenever a recommendation for the award of the medal of honor is approved by cable, and whenever a report is received announcing the award of the distinguished-service cross by the commanding general of the American Expeditionary Forces in Europe, and whenever the distinguished-service medal is awarded, such award, with a statement of the circumstances in each case, will be announced in general orders of the War Department by the Adjutant General of the Army without unnecessary delay.

4. The distinguished-service cross and the distinguished-service medal may be awarded posthumously to persons killed in the performance of acts meriting such award, or to persons whose death from any cause may have occurred prior to such award. The medal so awarded will be issued to the nearest relative of the deceased person.

5. No individual will be entitled to more than one distinguished-service cross or one distinguished-service medal, but each additional citation in War Department orders for conduct or service that would warrant the award of either of these decorations will entitle the person so cited to wear upon the ribband of the decoration and upon the corresponding ribbon a bronze oak leaf of approved design, and the right to wear such oak leaf will be announced as a part of the citation. Other citations for gallantry in action published

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44c

in orders issued from the headquarters of a force commanded by a general officer will be indicated in each case by a silver star three-sixteenths of an inch in diameter worn upon the ribband of the distinguished-service cross and upon the corresponding ribbon.

6. Recommendations for the award of the distinguished-service medal will be forwarded to The Adjutant General of the Army through regular channels.

7. When an officer or enlisted man is admitted to a hospital for treatment of a wound, or when an officer or enlisted man is treated for a wound without being admitted to a hospital, the commanding officer of the hospital, or in the latter case, the medical officer who treats the wound, will furnish the commanding officer of the wounded person with a certificate describing briefly the nature of the wound and certify to the necessity of the treatment. This information may be furnished to commanders of higher units in the form of certified lists, and will be transmitted by them to the commanding officers concerned.

8. Commanding officers will forward to The Adjutant General of the Army, through military channels, lists in duplicate of those officers and enlisted men of their commands who have been honorably wounded in action with a statement in the case of each individual, showing time and place wounds were received and organization in which they were then serving. Whenever a report is made of an action, it will be accompanied by the above-described list, and by certified copies of the medical officers' statements described in Par. 7.

9. Upon receipt of lists of wounded the commanding general of the American Expeditionary Forces in Europe is authorized to grant the rights to wear the wound chevron to the persons concerned, and he will note his action by indorsement in forwarding the papers.

10. The right to wear the wound chevron shall be confined to those who are authorized to do so by letter from The Adjutant General of the Army or from the commanding general of the American Expeditionary Forces in Europe.

11. The war-service chevron and the wound chevron shall be as described in Pars. 13½ and 84½, Special Regulations No. 42 (Uniform Specifications) (see Changes No. 2); will be worn as described in Par. 74½, Special Regulations No. 41 (Uniform Regulations) (see Changes No. 2); and will be furnished as directed in subparagraph 6 of Par. 66, Compilation of General Orders, Circulars, and Bulletins, War Department, 1881–1915.

12. Requests for the issue or purchase of these chevrons will be accompanied by a list of the persons for whom they are desired, for the information of the commanding officer who authorizes the issue. The officer, before approving a requisition or a purchase, will verify the right of the persons concerned to wear the chevrons requested. Requests for authority to wear the wound chevron on account of wounds received prior to the present war will be forwarded with all available evidence to The Adjutant General of the

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Army for verification through the War Department records and appropriate action.

13. Section XI, General Orders, No. 134, War Department, 1917, is rescinded. (210.5, A.G.O.)

67a

SERIAL NUMBER ON RECORDS

1. The serial number assigned to each Enlisted Man should appear upon all S. & W. Records, Form 52 and Form 53, just above the name.

2. The name and the number of the individual enlisted man should in all cases be obtained from his identification tag. In no case should the man's memory be trusted to furnish the correct number.

67b

EXTRACTS

LETTERS FROM SURGEON GENERAL

FEBRUARY 19, 1918.

DISCONTINUANCE OF REPORTS WHERE PATIENT IS IN HOSPITAL THREE MONTHS

The instruction in the letter from this office of August 18, 1910 directing that a report be furnished to this office in the case of any patient under treatment in hospital for more than 3 months are rescinded. These reports are no longer required by this office.

Recommendation has been made to the Adjutant General that Par. 287, M.M.D., be rescinded.

MARCH 14, 1918.

MONTHLY REPORT OF SURGICAL OPERATIONS

It is directed that the monthly report of Surgical operations be submitted on Form 55*k* Clinical Record, report of operations, the slips to be made day by day by carbon process or otherwise, assembled at the end of the month, and forwarded to this office, attention Division Surgeon.

APRIL 5, 1918.

PATIENTS IN HOSPITAL MORE THAN TWO MONTHS

Whenever an officer or an enlisted man remains in the hospital for a period of two months or longer, a report should be sent to the Surgeon General's office, stating the facts in the case and the reason for the prolonged stay, with recommendations as to the further disposition of the case.

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NOTICE SENT TO COMMANDING OFFICER OF WOUNDED SOLDIER

GENERAL ORDERS No. 6. WAR DEPARTMENT, JANUARY 12, 1918.

7. When an officer or enlisted man is admitted to a hospital for treatment of a wound, or when an officer or enlisted man is treated for a wound without being admitted to a hospital, the commanding officer of the hospital, or, in the latter case, the medical officer who treats the wound, will furnish the commanding officer of the wounded person with a certificate describing briefly the nature of the wound and certifying to the necessity of the treatment. This information may be furnished to commanders of higher units in the form of certified lists, and will be transmitted by them to the commanding officers concerned.

8. Commanding officers will forward to The Adjutant General of the Army, through military channels, lists in duplicate of those officers and enlisted men of their commands who have been honorably wounded in action, with a statement in the case of each individual, showing time and place wounds were received and organization in which they were then serving. Whenever a report is made of an action, it will be accompanied by the above described list, and by certified copies of the medical officers' statements described in Par. 7.

69a

REFUSAL OF SOLDIER TO SUBMIT TO OPERATION

Pursuant to section 2, G.O. No. 167, W.D., 1917, if a soldier in time of war refuses to submit to an operation or medical treatment, a board of three medical officers may be convened by the division commander or by the commander of a base hospital, and if such board advises that such operation or medical treatment is necessary to enable the soldier properly to perform his military duties, he may be tried by court-martial under the 96th article of war for thereafter persisting in his refusal. (Ops. J.A.G. 707, Jan. 25, 1918.)

During the present emergency the provisions of Par. 53, Compilation of Orders, and of Par. 220, Manual for the Medical Department, are suspended and the following substituted therefor:

In time of war if a soldier refuses to submit to operations or medical treatment, he will be examined by a board of three medical officers convened by the division commander or commander of a base hospital. If, in the opinion of the board, the operation or medical treatment advised is necessary to enable the soldier to perform properly his military duties, and he persists in his refusal after being notified of the findings of the board, he may be tried by court-martial under the 96th Article of War. (707.2, A.G.O.) (Par. 2, G.O. 167, W.D., 1917.)

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81a

DETECTION OF VENEREAL DISEASES

SURGEON GENERAL'S OFFICE, APRIL 29, 1918.

1. The present methods of complying with section (*b*), Par. 198, Manual For the Medical Department, U. S. Army, 1916, vary with the individual medical officers. Attention is called to the portion of the paragraph directing that "the inspection will be made at times not known beforehand to the men and preferably immediately after a formation."

A. The examining medical officer should have a table at his side, arranged upon which should be writing materials for noting names and physical conditions, slides for smears, and glasses for urine. In addition there should be conveniently placed for the surgeon's use a basin containing a one-half (½%) per cent. solution of liquor cresolis compositus or equally efficient disinfectant, and towels. The soldier should be ready for examination with his clothing loosened and everything prepared for quick exposure of lower abdomen and of thighs. When called for in his turn by the medical officer he then steps into place immediately before the examiner, in adequate light, parts properly exposed.

B. The medical officer should examine as follows:

1. Inspection of skin of the abdomen, thighs, and genitals.
2. Palpation of each groin.
3. Palpation of scrotum and contents.
4. Retraction of foreskin and inspection of corona, frenum, glans, and meatus.
5. Milking of urethra from peno-scrotal junction forward and separating lips of meatus.
6. Collection upon slide of any material appearing at meatus.
7. Inspection of clothing for urine voided to free meatus of discharge, and for soiling by discharge.
8. Washing of hands.

Care should be observed in performing steps 4 and 5. In retracting the foreskin and in stripping forward the urethra, it is possible to force back the discharge which thus may escape detection and aggravate any existent disease, bring on a posterior involvement.

2. These steps consume but little time. Less thorough inspection methods do not detect scrotal troubles, erosions, syphilitic rashes and glandular involvement. No reliance should be placed on memory; adequate records should be made at the time of examination, and absentees should be checked with accuracy.

276a

AUTHORITY OF ADJUTANT TO ADMINISTER OATHS AND ACT AS NOTARY

Under A.W. 114 the adjutant of any command, whether such command be separate or present with its division, is authorized to administer oaths for purposes of military administration and to act as notary public in foreign places where the Army may be serving. (Ops. J.A.G. 013.14, Jan. 25, 1918.)

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RED CROSS REPRESENTATIVE ASSIGNED TO BASE HOSPITAL

GENERAL ORDERS 17. WAR DEPARTMENT, FEB. 13, 1918.

5. A representative of the American Red Cross may be attached to each base hospital to furnish emergency supplies when called upon, to communicate with families of patients, to render home service to patients, and such other assistance as pertains to Red Cross Work. The representative of the Red Cross so assigned, together with his assistants, will be accredited to the commanding officer of the base hospital and will be subject to the same regulations as to status, privileges, assistants, and censorship as provided in preceding paragraph applying to the representative of the Red Cross assigned to divisions.

6. In order to render the above outlined service to the best advantage the accredited chief officer representing the American Red Cross at division headquarters will be a field director.

7. Officials of the Red Cross assigned on duty with the Military Establishment as outlined above will be required to wear the regulation uniform of the American Red Cross, together with the insignia, etc., as approved by the Secretary of War.

8. The commanding generals of all cantonments and National Guard encampments and the commanding officers of all other encampments or organizations to which Red Cross representatives may be assigned in accordance with this order are authorized to furnish to the American Red Cross anything that they may request within reason, such as warehouses, offices, light, heat, telephones, etc., in order to enable them to properly carry on the work for which they are assigned. (080, A.G.O.)

286a

LIGHT DIETS FOR BASE HOSPITALS

Because of the increased ease of preparation there is a more or less general practice among Base Hospital mess officers to make the light diet the same as the regular diet less meat. The practice will probably disappear as competent dietitians are assigned to the hospitals. However, in the meantime or in places where for any reason it is not convenient to work them out in the hospital, the following menus are suggested. These menus are based on a series worked out by Col. Booker, Commanding Officer of the Base Hospital at Camp Sheridan, and were reported by him to be working satisfactorily at that place. He repeated the same menus each week and this may be done indefinitely with the light diets as any one man is seldom on light diet for more than two weeks.

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286b

TABLE I

Menus for light diets for one week.

Note.—In these menus "cup" means approximately one-half pint of material prepared, ready to serve. The "Slices of Bread" refer to those of the one pound loaf or to the half slices of the army loaf, recommended by this division.

Sunday

Breakfast.		
1 orange	75 cal.	
1 cup rice with sugar and milk	200 cal.	
2 slices bread and butter	175 cal.	
1 cup coffee, half milk	200 cal.	
		650 cal.
Dinner.		
Chicken fricassee, medium service	150 cal.	
1 baked potato	150 cal.	
2 slices bread and butter	175 cal.	
1 cup tapioca pudding	250 cal.	
1 cup cocoa, half milk	240 cal.	
		965 cal.
Supper.		
1 soft boiled egg	80 cal.	
1 cup farina, with sugar and milk	250 cal.	
¾ cup stewed peaches	250 cal.	
2 slices bread and butter	175 cal.	
1 cup tea		
		755 cal.
Total		2370 cal.

Monday

Breakfast.		
⅔ cup stewed prunes	250 cal.	
1 cup oat meal with sugar and milk	200 cal.	
2 slices bread and butter	175 cal.	
1 cup coffee, half milk	200 cal.	
		825 cal.
Dinner.		
1 cup chicken soup	100 cal.	
2 soda crackers	50 cal.	
1 poached egg	80 cal.	
½ baked sweet potato	150 cal.	
1 cup orange jelly	200 cal.	
1 cup coffee		
		580 cal.
Supper.		
1 cup custard	300 cal.	
1 cup rice with milk and sugar	200 cal.	
¾ cup stewed apricots	250 cal.	
2 slices bread and butter	175 cal.	
		925 cal.
Total		2330 cal.

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Tuesday

Breakfast.

1 baked apple	200 cal.	
1 cup farina, with sugar and milk	200 cal.	
2 slices bread and butter	175 cal.	
1 cup coffee, half milk	200 cal.	
		775 cal.

Dinner.

1 cup scalloped oysters	150 cal.	
2 slices bread and butter	175 cal.	
½ cup ice cream	225 cal.	
1 cup cocoa, half milk	240 cal.	
		790 cal.

Supper.

1 poached egg on toast	125 cal.	
1 cup pettijohn, wheat with sugar and milk	200 cal.	
2 slices bread and butter	175 cal.	
¾ cup stewed pears	125 cal.	
		625 cal.
Total		2190 cal.

Wednesday

Breakfast.

2 slices pineapple	200 cal.	
1 cup oat meal with milk and sugar	200 cal.	
2 slices buttered toast	175 cal.	
1 cup coffee, half milk	200 cal.	
		775 cal.

Dinner.

Chicken fricassee, medium service	150 cal.	
1 medium baked potato	150 cal.	
2 slices bread with butter	175 cal.	
1 cup bread pudding	250 cal.	
1 cup cocoa, half milk	240 cal.	
		965 cal.

Supper.

1 soft boiled egg	80 cal.	
1¼ cup corn flakes, with milk and sugar	200 cal.	
2 slices bread and butter	175 cal.	
1 orange	75 cal.	
1 cup tea		
		530 cal.
Total		2270 cal.

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286d

Thursday

Breakfast.

⅔ cup stewed prunes	230 cal.
2 shredded wheat biscuits with sugar (and milk)	250 cal.
2 rolls with butter	175 cal.
1 cup coffee	
	675 cal.

Dinner.

1 cup chicken broth with crotons	100 cal.
1 egg as omelet	80 cal.
½ baked sweet potato	150 cal.
2 slices bread with butter	175 cal.
1 cup farina pudding	250 cal.
1 cup coffee	
	755 cal.

Supper.

1 cup tomato spaghetti	100 cal.
2 slices bread with butter	175 cal.
2 slices pineapple	200 cal.
1 cup cocoa, half milk	240 cal.
	715 cal.
Total	2145 cal.

Friday

Breakfast.

½ grape fruit	75 cal.
1 cup oatmeal with milk and sugar	200 cal.
2 slices buttered toast	175 cal.
1 cup coffee, half milk	200 cal.
	650 cal.

Dinner.

1 cup oyster stew in milk	200 cal.
2 soda biscuits	50 cal.
2 slices bread and butter	175 cal.
1 cup tapioca pudding	250 cal.
1 cup cocoa, half milk	240 cal.
	915 cal.

Supper.

1 soft boiled egg	80 cal.
1 cup farina, with sugar and milk	200 cal.
2 slices buttered toast	175 cal.
¾ cup stewed peaches	250 cal.
1 cup tea	
	705 cal.
Total	2270 cal.

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286e

Saturday

Breakfast.		
1 baked apple	200 cal.	
1 cup farina, with sugar and milk	200 cal.	
2 rolls with butter	175 cal.	
1 cup coffee, half milk	200 cal.	
		775 cal.
Dinner.		
1 egg as omelet	80 cal.	
1 medium baked potato	150 cal.	
1 cup creamed carrots	100 cal.	
2 slices bread with butter	175 cal.	
1 cup junket	150 cal.	
1 cup cocoa, half milk	240 cal.	
		895 cal.
Supper.		
1 poached egg on toast	125 cal.	
1 cup rice with sugar and milk	200 cal.	
2 slices buttered toast	175 cal.	
⅔ cup apple sauce	150 cal.	
		650 cal.
Total		2320 cal.

4. By this system the mess officer knows far in advance what items will be required and so his stock may be kept complete.

5. In addition to the above I am submitting a table from which an indefinite number of menus can readily be prepared. In preparing menus from the table it should be borne in mind that the total number of calories for such diet should be between 2000 and 5000. "Cup" has the same significance as in table I.

6. I believe in either case the menus will conform to the practices of the best civil hospitals of the country.

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TABLE II.—FOR PREPARATION OF MENUS FOR LIGHT HOSPITAL DIETS

Take one			BREAKFAST Take one			Take one	Take one
	Take one (1)	Take one	DINNER Take one (2)	Take one	Take one (3)	Take one	Take one
Take one	Take one marked "s"		SUPPER Take one			Take one	Take one
Cereals	Meats and meat substitutes	VEGETABLES High starch	VEGETABLES Green	Bread and butter	Soup	Desserts	Fruits	Drinks
Rice Oatmeal Florina Pettijohn Hominy (4) Shredded wheat (5) Cornflakes	Eggs (8) Chicken Oysters (5) Fish (4) Beef or mutton (4) Macaroni and spaghetti with tomatoes serves for both meat and vegetables.	Baked white potatoes Baked sweet potatoes	Spinach Lettuce Tomatoes Carrots (6) Green peas (6)	Liberty Rye White Graham Whole wheat Toast Rolls Crackers (7)	Beef soup Beef broth Chicken soup Chicken broth Oyster Stew Noodle soup Vegetable soup (8) Barley soup Chowder Boullion	Custard Ice cream Gelatine-jellies Puddings Farina Tapioca Cornstarch Rice Fruitbread	Raw: Apple Orange Grape-fruit Baked: Apple Canned or stewed peaches, fresh, apples, cherries, pears, plums Dried: Stewed: (9) Apples Apricots Peaches Prunes	Milk Coffee Cocoa Tea

(1) Omit this item if oyster stew or thick soup is served.
(2) Omit this item if soup is served.
(3) Omit this item if green vegetable is served.
(4) Do not serve more often than once a week.
(5) Do not serve more often than twice a week.
(6) Should be creamed and not served more often than once a week.
(7) Not to be served to replace bread or with soups, or oyster stew.
(8) For many cases should be strained before serving.
(9) Do not serve more than one dried fruit on any one day.

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TABLE III

Caloric values of small quantities of foods listed in Table II as prepared ready to serve, note that these values can in the nature of the case be only approximate but it is hoped that they may be of some value in helping the mess officer or dietitian to approximate the proper value for the day's rations.

Cereals.

1 cup of cereal with milk and sugar ..... 200 cal.
1 egg ..... 80 cal.

Meats.

1 cup of oysters, packed solid ..... 150 cal.
1 cup creamed chicken ..... 400 cal.
Beef mutton or chicken, small service ..... 100 cal.

Vegetables.

1 cup tomato macaroni ..... 100 cal.
1 medium potato, white ..... 100 cal.
1 medium potato, sweet ..... 200 cal.
1 cup tomatoes, canned ..... 50 cal.
Spinach or lettuce
1 cup creamed carrots ..... 100 cal.
1 cup creamed peas ..... 225 cal.

Bread.

1 slice bread, or 1 roll, or ½ slice army loaf ..... 50 cal.
Butter, 1 service butter (40 to pound.) ..... 85 cal.

Soups.

1 cup thin soup ..... 50 cal.
1 cup thick soup ..... 100–200 cal.

Dessert.

1 cup custard ..... 300 cal.
1 cup ice cream ..... 300 cal.
1 cup gelatine jelly ..... 200 cal.
1 cup pudding ..... 250 cal.

Fruits—Raw .....

1 apple, large ..... 100 cal.
1 orange, large ..... 100 cal
2 grapefruit, large ..... 200 cal.

Fruits—Baked.

1 apple, large, with sugar ..... 200 cal.

Fruits—Canned or stewed, fresh.

1 cup apple sauce ..... 250 cal.
3 large halves apricots, with juice ..... 100 cal.
1 slice pineapple, with juice ..... 100 cal.
3 halves pears, with juice ..... 100 cal.
1 cup cherries (stewed) ..... 100 cal.
1 cup stewed dried fruit ..... 400 cal.

Drinks.

1 pint milk ..... 800 cal.
1 cup cocoa ..... 240 cal.
1 cup coffee, half milk ..... 200 cal.

E. L. Scott.
Capt., S.C., N.A., Division of Food and Nutrition.

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WAR DEPARTMENT

OFFICE OF THE SURGEON GENERAL,
WASHINGTON.

JANUARY 1, 1918.

MEMORANDUM for all Division Surgeons, and Surgeons at Ports of Embarkation, and for Commanding Officers of General, Base, Embarkation, and other Hospitals.

Reports of inspectors indicate lack of uniformity in the care and isolation of infectious diseases *in hospitals*, and in many instances the steps taken are reported to be insufficient to prevent possible spread of infection and development of complications. The following procedure should be followed whenever local conditions permit. When any or all of the necessary medical department material is lacking requisition should be made by telegraph to this office for the medical articles, attention Colonel Howard, and referring to this memorandum as authority. *Such additional precautions should be taken as are deemed advisable by the Commanding Officer of the hospital.*

1. *Meningitis.*—Strict isolation should be instituted. Male attendants should be segregated and not allowed to eat or sleep with the sanitary detachment. The same steps should be carried out with female nurses as far as possible. When on duty in the wards all female nurses, male attendants and medical officers should wear operating gowns, caps, and gauze masks over nose and mouth. The hands should be thoroughly washed and disinfected after coming off duty and before leaving the ward. Cultures should be taken every fourth day from medical officers, nurses, and male attendants on duty in meningitis wards, and no such nurse or attendant should be assigned to other duty until a negative culture is obtained. Bedding, clothing, etc., of patients, and gowns and caps of attendants should be thoroughly disinfected by steam or chemicals before going to the laundry. Nasal and oral discharges of patients should be disinfected or burned. Dishes, etc., for bringing food should be sterilized before being returned to the general kitchen. Meningitis convalescents and carriers will not be returned to duty until after three consecutive negative cultures taken at intervals of from 3 to 6 days. Meningitis carriers should not be segregated in the same room with sick men with meningitis, but in a suitable segregation ward, camp or barrack.

2. *Diphtheria.*—The same precautions should be taken as prescribed for meningitis. In addition the Schick test should be applied to nurses and male attendants, and those not immune should be immunized.

3. *Measles.*—An allowance of at least 1000 cubic feet per patient should be provided in wards of barracks used for treating measles patients. Wires should be arranged across measles wards and sheets, or newspapers, hung over those in such a way as to form a screen between each patients (two); or some other suitable screening arrangement should be provided. This is

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with a view to preventing spread of pneumonia by droplet infection during coughing. Patients convalescent from measles should be retained in hospital, or in a well warmed convalescent barrack, for at least ten days after the temperature has permanently returned to normal. Medical officers, nurses and male attendants in measles wards will wear gowns, caps and masks. Nasal discharges and sputum of patients will be disinfected. Oral cleanliness should receive special attention. Attendants who have had measles should be selected, if possible, for duty in measles wards. Floors of wards should be gone over daily with a cloth wet in disinfectant. Dishes and eating utensils should be disinfected. Individual drinking cups should be used. Particular care should be taken to disinfect thermometers and other utensils as they pass from patient to patient. Wards should be kept warm. A urinary examination should be made before discharge from hospital.

Patients developing pneumonia should immediately be removed from the measles wards. They should not be placed in the same wards with primary lobar pneumonia.

4. *Pneumonia.*—Pneumonia patients should be treated in wards used exclusively for pneumonia. Ordinary lobar pneumonias and post-measles and post-scarlet fever pneumonias should not be treated in the same wards. At least 1000 cubic feet of air space per patient should be provided, and all of the precautions referred to in the section on measles should be carried out, viz., gowns, caps, masks, screens between beds, disinfection of utensils, thermometers, excretions and floors. Convalescent pneumonia patients should use a mild antiseptic mouth wash as long as they remain in the hospital, and should pay special attention to oral hygiene. Special attention should be given to the early detection of empyema.

5. *Scarlet Fever.*—All of the precautions prescribed in measles should be carried out in the treatment of this disease. Attendants who have had scarlet fever should be selected when possible.

Patients should not be relieved from quarantine until nasal, aural, glandular or other abnormal discharges have ceased, and all open sores have healed, nor earlier than six weeks after the onset of the disease under any circumstances. A urinary examination should be made before discharge from hospital.

6. *Smallpox.*—Patients should be handled with the same precaution as with meningitis, and in addition all attendants, and others in the vicinity, and all contacts, should be re-vaccinated. Smallpox may safely be treated in a room in the isolation ward if these precautions are observed.

7. Where the hospital facilities are insufficient to provide treatment for measles and scarlet fever patients for the period above prescribed, request should be made to the Commanding General for the setting aside of the necessary barracks or tentage for use as convalescent hospitals. Special attention should be given to keeping such convalescent quarters well warmed, and additional stoves should be installed if necessary. Warm and

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conveniently located lavatories are essential. Patients in the acute stage of measles and scarlet fever should use commodes.

8. Enlisted attendants in wards for infectious diseases should wear white cotton coats and trousers which should be changed twice a week. These garments are on hand in depots and should be required for at once by the local quartermaster.

9. No nurse or attendant should have charge of two different classes of the above-mentioned infectious diseases. Medical officers in charge of different classes of infectious diseases will carefully disinfect the hands before passing from one class to the other.

10. No blankets or mattress cover used for any of the above-mentioned diseases should be used for another patient until it has been disinfected by steam or chemicals or laundered at a steam laundry. Preferably they should be laundered. The underclothes of patients admitted for the above-mentioned diseases should be disinfected by steam or chemicals at once or laundered; preferably the latter. Outer clothing, except in the case of measles, should be disinfected by formaldehyde in a closed box, and then aired and sunned for three consecutive days.

11. In wards used for the above-mentioned infectious diseases, paper napkins are recommended for receiving nasal secretions. At the head of each bed will be kept a paper bag, fastened to the bed by adhesive plaster. These bags will be used for napkins, gauze, swabs, and other infectious refuse, and will be burned when full. Napkins and paper bags may be purchased locally, quoting this memorandum as authority.

12. The above precautions in regard to measles are prescribed primarily to diminish the incidence of the very fatal post-measles pneumonia which has reached alarming proportions in some camps. There has been widespread failure to appreciate the seriousness of measles under existing camp conditions.

13. Immediately on receipt of this memorandum, the Commanding Officer of a hospital will hold a conference with such of his assistants as are concerned with the handling of infectious diseases, and will arrange for the carrying out of the details as far as local conditions will permit.

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WARDMASTER, Continued

Pars. 279 and 313, Manual for the Medical Department, 1916, are changed as follows:

279. Change Sections (1) and (2) of subparagraph (*b*), Ward Rules, as follows:

(1) The head nurse, or in wards in which members of the Army Nurse Corps or Army Nurse Corps Reserve are not assigned the wardmaster, is responsible for the cleanliness and order of the ward, for the public property therein and for the effects of the patients until they have been turned over

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to the proper custodian, and is responsible for the prompt delivery of prescriptions to the dispensary, or medicines to the ward, and of the diet orders to the hospital office. (C.M.M.D., Mar., 1918.)

(062.11, A.G.O.)

313. *Head Nurse.* The chief nurse will designate one nurse for each ward to act as its responsible nursing head. The head nurse will be in charge of the ward, the nurses, the enlisted personnel and other persons assisting in the nursing care of patients, and of the patients, under the direction of the ward surgeon, and will be respected and obeyed accordingly. She will receive from the ward surgeon all orders relating to the care and treatment of the patients in her ward and will record them for the guidance of both day nurses and night nurses; she will be responsible for the proper nursing of the patients, the proper serving of all food in the ward, the administration of medicines and other treatment prescribed, the cleanliness and order of the ward and for the public property therein. She will be responsible to the chief nurse for the conduct and work of the ward nurses and their assistants; will advise the chief nurse concerning their efficiency and will report upon the efficiency of the enlisted personnel in the ward to the proper authority. Her hours of duty will be the same as those of other nurses. Ordinarily she will be required to perform night duty only one month in six. (C.M.M.D., Mar., 1918.)

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COMPLIANCE WITH STATE LAWS AS TO MEDICAL PRACTICE BY ARMY SURGEON

An Army surgeon occupying an official position in the Federal Government must in any practice outside his official duties, so far as the laws of any State apply to the practice of medicine or to the writing of prescriptions, comply with the laws of such State, unless special exemption in the form of permission to practice medicine during the present emergency is granted by such State to an Army surgeon or other Federal official in the active service of the United States Government. (Ops. J.A.G. 701, Jan. 19, 1918.)

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PROMOTIONS IN THE MEDICAL RESERVE CORPS

Individual applications for promotion of officers of the Medical Reserve Corps should be discouraged. At such intervals as they may think advisable, recommendations should be submitted by commanding officers, for the promotion of deserving officers serving under them.

Only in very exceptional instances should officers within the draft age be recommended for increased grade until they have had at least six months active service and then only if specially qualified.

Recommendations for the grade of Major should only be made if there is a position vacant which ordinarily carries that grade and after the individual

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has been thoroughly tried out and it is assured that he is fully capable of filling that position.

All recommendations for the promotion of officers of the Reserve Corps should be forwarded through channels, and should recite the officers' age, length of service under his present commission, total length of active service and his special qualifications for grade recommended.

PROMOTIONS AND LINEAL RANK OF OFFICERS IN RESERVE CORPS

Officers in the Reserve Corps are not promoted, but are appointed and recommissioned in the higher grade. They take rank according to the dates of the orders placing them on active duty. A captain ordered to active duty in August, 1917, ranks an officer ordered to active duty as a first lieutenant in May, and recommissioned a captain in December. (Ops. J.A.G. 210.725, Jan. 7, 1918.)

RELATIVE RANK BETWEEN OFFICERS OF SAME GRADE APPOINTED AND PROMOTED ON SAME DAY

Section 1219, Revised Statutes, providing that in fixing relative rank between officers of the same grade and date of appointment and commission, the time which each may have actually served as a commissioned officer of the United States, whether continuously or at different periods, shall be taken into account, applies only to the determination of relative rank between officers appointed on the same date, and has no application to relative rank between one officer appointed and one promoted on the same day. (Ops. J.A.G. 210.724, Jan. 25, 1918.)

DISTINCTIONS BETWEEN COMMISSIONS IN THE REGULAR ARMY, THE FEDERALIZED NATIONAL GUARD, AND THE OFFICERS' RESERVE CORPS; LIMITATIONS OF THE RIGHT OF AN OFFICER TO RESIGN

A commission in the Regular Army is a permanent one, carrying with it the rights of retirement and can be terminated only in the manner provided by law. Commissions in the National Guard (drafted into the service of the United States) and the National Army are for the period of the emergency and can be terminated by the President for any cause which, in the judgment of the President, would promote the public service, or upon the approved finding of a board of officers appointed by the general commanding a division or higher tactical organization or territorial department. (Selective Draft Act, May 18, 1917, sec. 9). Commissions in the Officers' Reserve Corps are for a period of five years unless sooner terminated in the discretion of the President. (National Defense Act, June 3, 1916, sec. 37.)

The right of an incumbent of a military office to resign his office at pleasure is subject to certain restrictions growing out of his military status. Thus, the resignation of an officer under charges need not be accepted. Similarly, the resignation of an officer in time of war may be refused. (Ops. J.A.G. 211.22, Jan. 9, 1918.)

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ACCEPTANCE OF COMMISSION BY ENLISTED MAN TERMINATES HIS ENLISTMENT

An enlisted man, having been commissioned as second lieutenant in the Infantry Reserve Corps, and assigned to active duty, was subsequently honorably discharged from the Infantry Reserve Corps. HELD, that since a man cannot properly serve in a military force as an enlisted man, and also as an officer superior to himself, the acceptance of such commission automatically discharged the soldier from the service as an enlisted man; that his honorable discharge from the Infantry Reserve Corps entirely terminated his connection with the military forces of the United States, and that he could not therefore revert to the status of an enlisted man. (Ops. J.A.G. 220.8, Jan. 26, 1918.)

PROCEDURE OF BOARDS FOR DISCHARGE OF OFFICERS

Under section 9 of the act of May 18, 1917, boards appointed to examine into and report upon capacity, qualification, conduct, and efficiency of any commissioned officer, other than officers of the Regular Army, may be appointed by the general commanding any division or higher tactical organization or territorial department. If such a board finds adversely to the continuance in the service of any such officer, its findings must be transmitted to the President for his approval. To enable the President to perform intelligently his function in connection with such finding, the same should be accompanied by a stenographic report of the whole proceeding, or, if that be impracticable, by a résumé of the evidence submitted to the board sufficiently full to show the character of the testimony on which such finding is based. (Ops. J.A.G. 210.81, Jan. 14, 1918.)

LIMITATIONS ON PROHIBITION AGAINST HOLDING CIVIL OFFICE

The prohibition against the holding of a civil office by an officer of the Army (R.S., 1222) applies only to the Regular Army. Hence, an officer in the Officers' Reserve Corps or in any component part of the United States Army other than the Regular Army may hold a civil office, unless denied such right by the law of the State under which he holds such office. (Ops. J.A.G. 324.241, Jan. 5, 1918.)

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CARE, TREATMENT, AND DISPOSAL OF THE INSANE

(From recent changes in Army Regulations)

464. The following classes of persons are entitled by law to admission to St. Elizabeth's Hospital, Washington, D. C.: (1) Officers, contract surgeons, and enlisted men of the Army who have become insane while in the military service, or within three years after their discharge therefrom, from causes which arose during and were incident to such service; (2) inmates of the

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Soldier's Home and of the National Home for Disabled Volunteer Soldiers; Volunteer Soldiers; (3) civilian employees of the Quartermaster corps who may become insane during such employment; (4) general prisoners; (5) interned persons and prisoners of war, under the jurisdiction of the War Department, who are or may become insane.

The Secretary of War is authorized by law to transfer from any military hospital to the nearest available public hospital for the care of the insane any insane patient who is in need of treatment, preference being given to the hospital nearest to the place of the patient's enlistment. The superintendent of such public hospital has the right to retain the aforementioned class of patients in his hospital in the same manner and to the same extent as now possessed by the superintendent of St. Elizabeth's Hospital. The Secretary of War is also authorized by law, during the existing emergency, to transfer to the various public hospitals for the care of the insane, patients of every class entitled to treatment in St. Elizabeth's Hospital and that are admitted on order of the Secretary of War. The War Department will from time to time advise department commanders and others concerned of the public hospitals designated by the Secretary of War to receive insane patients transferred under this authority. (C.A.R., No. 64, Dec. 13, 1917.)

(046.3, A.G.O.)

464½. Applicants for enlistment and drafted men who are found to be insane after arrival at depot, post, or camp, and before the completion of their enlistment by oath, muster in, or otherwise, will be disposed of as follows: (1) Those whose liberation will be unattended by danger to themselves or others will be rejected and disposed of under the regulations governing the disposal of other rejected recruits; (2) those whose insanity is of a type that would probably make their liberation a source of danger to themselves or others will be delivered to the civil authorities authorized by law to apply for the commitment of insane persons, of the place where they applied for enlistment or whence they were drafted. The depot, post, or camp commander will provide the necessary escort for such delivery, and issue the necessary travel orders, transportation, and subsistence (in kind or by commutation as may be most suitable).

A similar procedure will be followed in the case of civilian employees of the Quartermaster Corps who are found to have been insane before the beginning of their employment. (C.A.R., No. 64, Dec. 13, 1917.)

(046.3, A.G.O.)

465. (Changed by C.A.R., No. 46, W.D., 1916.) Except as provided in Par. 467 of these regulations the insane of the military service enumerated in Par. 464 who require treatment in institutions for the insane will be promptly transferred to the institutions designated to receive them respectively.

No person will be transferred under the provisions of this paragraph except after a critical examination by a board of at least two medical officers, of whom one shall if practicable, be a specialist in nervous and mental diseases. The examination will preferably be made in hospital, and in the

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special ward for nervous and mental diseases, should there be one; and the board will not make its report until after the person being examined shall have been observed for a reasonable period of time. The report will give the diagnosis, a detailed account of the medical history of the case, and a statement as to whether the disability was or was not incurred in line of duty; also a statement as to whether the patient, if discharged from the service, can be released from military control without danger to himself or others, and the board's recommendaton for or against the patient's transfer for treatment to such designated institution; all papers to be executed in duplicate.

Should the board recommend the patient's transfer for treatment to a designated institution, its report and all papers therewith and the medical certificate required by the Department of the Interior (blank form for which is furnished by The Adjutant General of the Army) properly filled in will be forwarded for the action of the department or division commander, who will, if he approves the transfer, issue the necessary orders therefor and for such escort, transportation, and subsistence as may be required.

Commands that are ordinarily exempted from the control of department and division commanders will forward such papers to the commander of the department within the territorial limits of which the command is located, for his action.

The department or division commander will send one copy of the board's report and the medical certificate to the institution to which the patient is transferred, and will forward the second copy of the board's report, etc., with a note thereon of his action, to The Adjutant General of the Army.

If the patient so recommended is an enlisted man, the record, and the report of the board of examining medical officers, will be prepared on the certificate of disability blank form in duplicate, accompanied by the necessary attached papers, and, in the event that his transfer is ordered, he will be discharged from the service on account of disability. (C.A.R., No. 64, Dec. 13, 1917.)

(046.3, A.G.O.)

466. (Changed by C.A.R., No. 13, W.D., 1914; No. 22, W.D., 1915; and No. 55, W.D., 1917.) Upon the departure of the insane patient his immediate commanding officer will make and sign an inventory, in duplicate, of his effects, and will send one copy of the inventory, together with his money and other valuables by registered mail, to the superintendent of the institution to which he is transferred, retaining the other copy for the records of the command. The other effects of the patient, such as clothing, will accompany him as baggage. Upon the patient's departure the commanding officer will by telegraph advise the institution thereof and of the time when the patient will be due to arrive. (C.A.R., No. 64, Dec. 13, 1917.)

(046.3, A.G.O.)

467. The insane of the military service in the Philippine and Hawaiian Islands, who appear to require treatment in institutions for the insane,

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except natives, will be sent by the department commanders to Letterman General Hospital, San Francisco, Cal., for observation in that hospital, before action is taken in their cases in accordance with the provisions of Pars. 465 and 470. The insane in the Canal Zone and among other forces overseas will in like manner be sent to an Army hospital in home country near the suitable home port of the Army Transport Service for observation preliminary to similar action.

Insane natives of the Philippine Islands and Porto Rico serving in the Army of the United States may, under authority of the Secretary of War, be sent to asylums in the Philippine Islands and Porto Rico, respectively. (C.A.R., No. 64, Dec. 13, 1917.)

(046.3, A.G.O.)

468. Army patients committed to institutions for the insane under these paragraphs will, when cured, be released from custody under the laws and regulations governing the release of other cured patients. To obtain the release of an Army patient who is not cured, or his delivery to the care of friends, application must be made therefore to The Adjutant General of the Army, accompanied by the recommendation of the superintendent of the institution. (C.A.R., No. 64, Dec. 13, 1917.)

(046.3, A.G.O.)

469. The insane who do not require treatment in institutions for the insane will, unless permanently incapacitated for military service, be retained under military control. If they are permanently incapacitated for service and can be liberated without danger to themselves or others they will be discharged on certificate of disability. In case it is necessary to send a soldier to his home with an attendant he should not be discharged until he reaches his destination. (C.A.R., No. 64, Dec. 13, 1917.)

(046.3, A. G.O.)

470. An enlisted man who requires treatment in an institution for the insane by reason of insanity existing before his enlistment is not entitled under Par. 464 to be cared for at the expense of the United States. Each such case will nevertheless be examined and reported on in the same manner as the cases referred to in Par. 464. The conclusions of the board being approved by the authority who is to take final action thereon, the soldier will be discharged for disability, and the following procedure had: His immediate commanding officer will communicate with his family or friends, with the civil authorities authorized by law to apply for the commitment of insane persons of the State where he was enlisted or whence he was drafted, and with the like civil authorities of the State which he claims as his home, to ascertain whether they will receive and care for the man at their own expense. Should they agree to do so, the man will be sent under proper escort to the family or friends, or to the local authorities mentioned, as may be appropriate. Should they refuse to take charge of him the soldier will be sent to a designated public hospital for the insane pending the determination of what civil authorities are legally required to assume his care and

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treatment. Upon the soldier's departure his commanding officer will by telegraph advise the hospital thereof and of the time the soldier will be due to arrive.

Whichever action is taken, the effects of the soldier will be inventoried as under Par. 467; his money and valuables will be secured for disposition as indicated below; and his other effects, such as clothing, sent with him as baggage to his destination. In case his family or friends or the local committing authorities agree to receive him, they will be advised that his money and valuables are subject to the orders of the person legally authorized to receive the same in the insane man's behalf upon presentation of proof of such authority. In case he is sent to a designated public hospital for the insane pending the determination of what civil authorities are ultimately chargeable with his care, his money and valuables will be sent by registered mail to the superintendent of such hospital, accompanied by one copy of the inventory.

Full report of the action taken in each such case will be made to The Adjutant General of the Army. (C.A.R., No. 64, Dec. 13, 1917.)

(046.3, A.G.O.)

The transfer card (Form 52, M.D.), properly filled in and signed, is sent by the surgeon, direct to the Surgeon General of the Army, with a copy attached of the medical certificate required by the Department of the Interior.

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CASES FOR DOMESTIC SERVICE

ADJUTANT GENERAL'S OFFICE, WASHINGTON, APRIL 2, 1918.

Hereafter all cases sent before the Surgeon to be examined with a view to discharging them on Surgeon's Certificate of Disability, and who come under the heading of Border Line Cases, will not be discharged, but their Service records will be indorsed "Fit for Domestic Service Only."

All such cases will be held to service in the United States for such work as they may be capable of performing.

See page 170.

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EXTRA DUTY PAY IN TIME OF WAR

THE ADJUTANT GENERAL'S OFFICE, FEB. 21, 1918.

Instructions heretofore issued from the War Department, suspending extra pay, during the continuance of the present emergency, to enlisted men actually performing extra duty, are hereby revoked. Department, division and other commanders are directed to restrict the employment of enlisted men on extra duty to the absolute necessities of the present emergency.

By order of the Secretary of War.

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DISPOSAL OF MEN TO FILL SPECIFIED GRADES

1. The Surgeon General has been directed that where Medical Corps enlisted personnel is requested to fill specified grades—as far as practicable men already appointed in the grades to be filled will be supplied—where it is not practicable to select men in the grades required, instructions shall be issued in each case that men shall be selected with a view to their appointment to the respective grades to be filled.

2. No men will be transferred from organizations designated as a part of a division by local Commanding Officers without authority from the War Department.

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COMPENSATION OF MAIL ORDERLIES FOR DELIVERING SPECIAL DELIVERY LETTERS

Enlisted men detailed as mail orderlies are relieved from their usual military duties. They should not, therefore, be permitted to accept from the postal authorities compensation for delivering special delivery letters and packages at a camp. (Ops. J.A.G. 311.1., Jan. 11, 1918.)

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COMPILATION OF INSTRUCTIONS IN REGARD TO RECRUITING FOR THE ARMY

ADJUTANT GENERAL'S OFFICE, WASHINGTON, FEB. 21, 1918.

1. Applicants for original enlistment for the Regular Army, National Guard and National Army must be between the ages of 18 and 40 years, both inclusive. Persons who have attained their 41st birthday are ineligible for original enlistment. Minors between the ages of 18 and 21 may be enlisted without the consent of parent or guardian. Minors under 18 are not now eligible with or without consent of parents. Married men may be enlisted on the same basis as single men.

2. The enlistment in the Army of registrants (except for the limited classes of persons who may be enlisted for the enlisted reserve corps. See Section 151, Selective Service Regulations as amended) is prohibited under the Selective Service Regulations prescribed by the President. Under the head of registrants are included all persons who, on June 5, 1917, had attained the age of 21 and had not attained the age of 31. Persons within the prescribed ages who were not subject to registration on account of being in the military or naval service of the United States become subject to registration and are required to register, immediately upon leaving such military or naval service. Aliens who have not declared their intention to become citizens of the United States and who have not entered the United States for the first time since June 5, 1917, are not subject to registration. Citizens or persons who have declared their intention to become citizens, who are within the prescribed ages, and who have not hitherto registered on account of

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absence without the territorial limits of the United States, are required to register within five days after their return to the United States.

3. The only educational qualification necessary is ability to speak English. The enlistment of aliens not subjects of an enemy country or her allies is authorized, if otherwise eligible and qualified, without declaration of intention to become citizens. The enlistment of subjects of the enemy or her allies, including those who may be claimed as subjects by such countries, is prohibited, even though they may have taken out their first papers. Accepting and enlisting officers should inquire carefully into the loyalty of applicants for enlistment and reject those of whose loyalty there is doubt.

4. The minimum height and weight requirements are 61 inches and 110 pounds, respectively. Accepting and enlisting officers should be guided, but need not be strictly governed, by the published tables of physical proportions. Men who do not meet the weight and chest requirements prescribed for certain heights may be accepted and enlisted if they are deemed suitable for the particular service for which they apply, but care must be exercised to take only good risks and doubtful cases should be submitted to The Adjutant General of the Army for Instructions.

5. The declaration blank and oath of enlistment will be changed so far as relates to period of enlistment, to read "for period of emergency unless sooner discharged."

6. Enlistments for the National Army are restricted to special and technical troops for which voluntary enlistments have been authorized. Accepting and enlisting officers are enjoined to exercise care to determine for which branch of the Army, *i.e.*, Regular Army, National Guard or National Army, an enlistment is to be made, and to have the caption of the enlistment paper show correctly the branch for which enlisted. Form No. 22, A.G.O., should be used for voluntary enlistments for all branches of the Army.

7. Great care should be exercised by all accepting and enlisting officers to see that the enlistment papers are properly filled out in every particular and signed by the executive officer.

8. It is desired that this compilation be published by commanders of territorial departments and tactical divisions to recruiting officers in their commands, and by chiefs of staff corps and departments to recruiting officers at independent stations under their jurisdiction.

493a

SERVICE RECORDS OF DRAFTED SOLDIERS

1. The service records of each selected man who may be inducted into the service in the future will have entered upon it the designation of the man's local board, his red ink or serial number and his order number. This information, obtained in each case from the registration card, will, until a new form for service record is provided, be entered on page 3 of the service record: "Current Enlistment." The Army serial number will be entered after the

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man's name on the first page as prescribed in Par. 19, letter from the Adjutant General's Office dated February 23, 1918.

NOTATIONS ON DISCHARGE FORMS

In discharges and on forms No. 1029 "A," "B," "C," "D," P.M.G.O., there should be used words to convey accurately and completely the reason for discharge, such as "for dependency," "alien enemy," "under age," etc.

493a

ENLISTMENTS OF DISABLED SOLDIERS FOR PURPOSE OF REHABILITATION

GENERAL ORDERS 1. WAR DEPARTMENT, January 2, 1918.

III. Enlistments of disabled former soldiers for purposes of rehabilitation under the provisions of section 304 of the act of Congress approved Oct. 6, 1917, published in Bulletin No. 57, War Department, 1917, will be for the Regular Army, and the regular enlistment paper, Form No. 22, A.G.O., will be used, the notation "Disabled soldier" being made at the top of first page of the form, and the declaration and oath changed by erasing the words "for the period of three years in the active service and four years in the Regular Army Reserve," substituting therefore the words "under the provisions of the act of October 6, 1917." In the oath of enlistment the words "unless sooner" will be erased, substituting therefore the word "until."

(342.161, A.G.O.)

493a

FRAUDULENT ENLISTMENT BY REASON OF CONCEALMENT OF MINORITY

Judge Advocate General Decision of February 25, 1918.

2. A man guilty of fraudulent enlistment by reason of concealment of minority is prevented from taking advantage of his own fraud and may be continued in the service at the option of the Government. The enlistment is, however, voidable at the option of the Government; and where the man so enlisted has been discharged on account of the fraudulent enlistment all rights which he acquired by reason of such fraudulent enlistment are voided. Consequently, the Government is entitled to cancel all insurance applied for by and granted to such man while in the service.

553a

NEW FORM FOR PAYROLL

EXTRACT FROM LETTER A.G.O., APRIL 15, 1918

"Pending preparation new form payroll beginning with April, rule seven narrow columns in space for remarks on 'present' payroll headed 'Army Serial Number,' 'Class A Allotments,' 'Class B Allotments,' 'Insurance Premiums,' 'Second Liberty Bond, Federal Reserve Bank,' 'Third Liberty Bond, Secretary Treasury,' 'All other Class E Allotments.' Organization commanders will enter Army Serial Number and amount allotments each class in proper columns entering amounts of premiums for War Risk Insurance and private insurance separately but in same column.

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Under heading all other Class E Allotments enter all allotments made on form thirty-eight Q.M.C., except Liberty Bond allotments made to Federal Reserve Bank and Secretary Treasury. No remarks regarding allotments will be entered except to correct error on previous rolls or when payment is being made for more than one month and one or more of allotments have commenced or terminated within period for which paid. Remarks on payrolls should commence under soldier's surname one inch from left margin and continue to but not into first allotment column."

566a

GENERAL ORDERS 21. WAR DEPARTMENT, MARCH 1, 1918.

Section 11, *General Orders, No.* 94, *War Department,* 1917, *is rescinded, and the following is substituted therefor:*

All persons connected with the military service who receive information of proposed inland or oversea movements of organizations, detachments, or individuals are forbidden to make public the details of such movements.

The names of organizations, dates of departure, arrival, or of embarkation, or the name of the port of embarkation, or of the ships to be used in such movements, will not be disclosed.

When necessary to advise relatives or other private persons of approaching departure, persons connected with the military service will convey only information absolutely necessary, which will not include rail routing or probable time of arrival at any station or dates, or names of ships, or ports of departure, or the destination of organizations.

The marking of cars or of baggage so as to indicate an oversea destination, the date of departure, or the name of the ship which is to sail will be avoided. Baggage for oversea shipments will be addressed to the Quartermaster of the port of embarkation and information furnished the quartermaster as to the disposition to be made of it.

After arrival in France or England no information will be given concerning names of organizations arriving, destinations of organizations, names of vessels, information concerning convoys, routes pursued, measures taken to avoid attack, dates of arrival, debarkation or departure, numbers of troops, or character of cargoes carried.

Officers and men will avoid talk or discussion with reference to military matters while in any public place. After joining the American Expeditionary Forces all officers and men will view with suspicion any person asking questions about military subjects or discussing such topics where there is a possibility, however remote, of such information reaching the enemy.

Commanding officers of all vessels carrying troops to join the American Expeditionary Forces will cause this order to be published en route to all persons in the military service.

Violations of the provisions of this order will be investigated and disciplinary measures applied to offenders.

(000.72, A.G.O.)

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566a

CONFIDENTIAL AND SECRET DOCUMENTS

Extract of changes No. 6, Compilation of Orders December 14, 1917.

Prepared for distribution to all officers and organizations in the Army—company and detachment commanders will instruct men as to the restrictions imposed herein.

COMPILATION OF ORDERS

CHANGES No. 6. WAR DEPARTMENT, WASHINGTON, DEC. 14, 1917.

EXTRACT

176. (Page 407.) Documents and maps marked "Secret," "Confidential," or "For official use only"—1. A document or map marked "Secret" is for the personal information of the individual to whom it is officially entrusted and of those officers under him whose duties it affects. The officer to whom it is entrusted is personally responsible for its safe custody and that its contents are disclosed to those officers mentioned above, and to them only. The existence of such a document or map will not be disclosed by the officer to whom it is entrusted, nor by his officers without the sanction of superior military authority. No document or map marked "Secret" will be taken into the front line trenches in the theater of war. A document or map marked "Secret" even though it may bear other classifying marks, such as "Confidential" or "For official use only" will, nevertheless, be regarded as "Secret," within the meaning of this paragraph.

2. "A document or map marked "Confidential" is of less secret a nature than one marked "Secret," but its contents will be disclosed only to persons known to be authorized to receive them or when it is obviously in the interest of the public service that they receive them.

3. The information contained in a document or map marked "For official use only" will not be communicated to the public or to the press, but may be communicated to any person known to be in the service of the United States, simply by virtue of his official position.

4. Documents and maps classed as "Secret" or "Confidential" will not be referred to in any catalogue or publication which is not itself a document marked "Secret" or "Confidential," as the case may be. An officer or soldier who communicates information contained in a document or map marked "Secret" or "Confidential" or "For official use only" will at the same time inform the person or persons to whom he communicates the information that it is "Secret" or "Confidential" or "For official use only," as the case may be. The only legitimate use an officer or soldier may make of documents or information of which he becomes possessed in his official capacity is for the furtherance of the public service in the performance of his duty. Publishing official documents or information, or using them for personal controversy, or for any private purpose without due authority, will be treated as a breach of official trust, and may be punished under the Articles of War, or under section 1, Title I, of the esponage act approved June 15, 1917. (Bulletin No. 43, War Department, 1917.) (C.C. of O. No. 6, Dec. 14, 1917.)

(000.72, A.G.O.)

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566a

CODE TELEGRAMS

1. Telegrams giving information relative to movement of troops must in all cases be coded. Any telegrams on this subject giving the strength of organization, baggage, freight, etc., should be written by the commanding officer of the organization in straight reading matter, then coded and forwarded. Under no circumstances should a message relative to troop movement be sent in straight reading matter.

2. Immediately preceding the departure of an organization from a post, the commanding officer of the organization should prepare a telegram giving the number of officers, number of enlisted men, weight and cubic dimensions of the light baggage, heavy baggage, and freight and the amount of transportation attached (stating whether motor or wagon), the time of departure, and the expected time of arrival at destination. These data should be turned over to the Quartermaster prior to departure, who will code the same and forward to both the commanding officer at destination and the Quartermaster, of the Department, who handles the routing, schedule, etc., of the movement.

567a

DESTRUCTION OF INSURED PACKAGES BY C.O.

Where, for the good of the service or for other good and sufficient reason, commanding officers order the destruction of insured packages addressed to soldiers and containing eatables, liquors, etc., such packages should be destroyed under the supervision of a commissioned officer and in the presence of the enlisted men to whom the packages were addressed. At the time of destruction of such packages, the addressee should be required to sign a receipt therefor.

568a

MAIL RESTRICTIONS FOR TROOPS ABROAD

Post office order No. 1259 dated Apr. 8, 1918, reads as follows:

"*Postmasters must secure the assurance of the sender in each case that all the articles contained in the parcel are sent at the addressee's approved written request, and that such request is enclosed in the parcel, by requiring the sender to place on the wrapper of the parcel under his name and address the following endorsement:*

"*This parcel contains only articles sent at approved request of addressee, which is enclosed.*"

The approved written request shall be enclosed in the parcel. Parcels, *whether sealed or unsealed,* containing articles not being sent in accordance with such approved written request shall not be accepted for mailing. Such when offered for mailing shall be returned to the sender. The foregoing order and instructions are issued at the request of the War Department and

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in pursuance of an order of that Department dated March 28, 1918, which provides as follows:

"In future shipments of any articles to members of the American Expeditionary Forces abroad will be limited to those articles which have been requested by the individual to whom same are to be shipped, such request having been approved by his regimental or higher commander. Parcel post shipments will be accepted by the post office authorities and other shipments by express or freight companies only upon presentation of the above approved request in each individual case."

The Post Office Department believes that this action is prompted by military necessity and that the public will cheerfully acquiesce in it. Postmasters are hereby instructed to enforce it rigidly. When there is doubt in any particular instance as to the application of the order and instructions above referred to, or further information concerning this subject is desired, inquiries relative thereto should be addressed to the Third Postmaster General, Division of Classification.

581a

INSURANCE, Continued

Statement required from officers and enlisted men when they do not desire insurance.

To comply with instructions from The Adjutant General of the Army, dated January 12, 1918, which were published on that date and on January 18, all company commanders are required to secure from each officer and enlisted man, not insured, a statement that he does not desire the insurance and that the provisions of the insurance law, and privileges they are entitled to under it, have been fully explained to them. These statements will be forwarded to the department or division in which the man is serving.

581a

War Risk Insurance Premium may not be paid in part by the insured and part of premium paid by some other party.

The stand of the Bureau of War Risk Insurance has taken upon the question as to whether part of the premium on a policy may be paid by the man in the Service and part of the premium paid by some other party is as follows: "While the act seems to provide that the insurance premiums may be paid in any way which the insured may elect, it is manifestly impossible to permit one person to pay part of the premium and another person the other part. It will be apparent that the situation might arise whereby the insured will pay his part and the third party fail to perform his agreement. This would leave the insured without protection, for a partial payment could not be construed as a full payment. For the protection of the insured, therefore, premiums will not be accepted in installments. If former employers or the man's family desire to pay the premiums the same will be accepted in accordance with regulations laid down, but in those cases the enlisted man should notify his commanding officer of the fact and request that no deduction for insurance be made from the payroll."

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581a

Premiums.

By the terms of the policy issued by the Bureau of War Risk Insurance, the premium upon insurance for any month is not due until the last day of the month; if not paid when due, the insurance continues in force for a period of 31 days, the insurance immediately terminates, but the assured may be reinstated within six months upon compliance with the terms and conditions specified in the regulations of the Bureau. By making the premium payable at the end of each calendar month, the Government extends credit to the assured from the date of his application to the end of the month. The Bureau of War Risk Insurance has ruled that the premium for a month is not divisible. Accordingly, an assured who applies on the tenth day of a month pays on the last day of such month the premium for insurance from the date of his application to the tenth of the following month; and if he dies between the tenth and the last days of any month, he dies indebted to the government for one month's premium. This must be paid either by deduction from his pay or by deduction from the face of the policy. Consequently, if a man should die while absent from duty such circumstances as to require stoppage of his pay under G.O. 45, W.D., 1914, the rights of his beneficiary would depend upon circumstances of the particular case as to the payment of premiums. If the death occurred during the part of a month for which part of the premium was not paid and before the premium therefore was due, the beneficiary would be entitled to the face value of the policy, less one month's premium. If the death occurred within 31 days after the premium became due and more than one calendar month after the period covered by previously paid premiums, the beneficiary would be entitled to the face of the policy less the premiums for two months' insurance. It is possible to conceive a case where the death occurred on the 31st day after the premium was due, and where three full months' premiums would have to be deducted from the face value of the policy. If the death occurred more than 31 days after the due-date of the premium and the premium was still unpaid, the beneficiary would receive nothing. If a soldier is returned to duty and released from further operation of G.O. 45, W.D., 1914, within 31 days after the premium in question is due, the lapsed premium may be deducted from his pay in order that he may receive the full benefits of his War Risk Insurance. If, however, the premium remained unpaid for more than 31 days after the due-date, the enlisted man must be reinstated under the rules and regulations provided by the Director of the Bureau of War Risk Insurance. Thus far the Treasury Department has prescribed no rules or regulations for such reinstatement. Should a case arise where a soldier whose policy has been terminated desires to be reinstated, he should tender the amount of the lapsed premium, with interest at 6 per cent. with a written request for reinstatement. In this manner there would be saved to him whatever rights he might have under the circumstances. And until the Bureau of War Risk Insurance prescribed regulations for reinstatement this is the only method by which such a soldier can protect his

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rights. In the foregoing it is assumed that the assured has not paid the premium or caused it to be paid from other sources than his pay, and that the United States does not owe the man on account of pay or deposit an amount sufficient to pay the premium. It must be remembered that the policy expressly provided that the amount of premium will be deducted from any deposit of the enlisted man with the United States, and that if upon the due-date the United States owes the enlisted man on account of pay or deposit an amount sufficient to pay the premium, the premium will be treated as paid.

581a

Papers filed by claimant for insurance.

The official address of the Bureau of War Risk Insurance is care of Treasury Department, Washington, D. C. The papers to be filed by the claimant are as follows:

1. Affidavit of beneficiary, Form 514, requiring data as to the relationship of the beneficiary as well as the names and ages of all other relatives within the permitted class. This affidavit must be sworn to by the claimant, and signed by two witnesses who know the person making claim for insurance.

2. The claim for compensation for death is made on Form 27 and requires information concerning the deceased, including the following, which the beneficiary might have difficulty in procuring; height, complexion, color of eyes, color of hair, identifying scars or marks, place of birth, full name of deceased's mother, and her financial condition.

3. A certified copy of the church record is required to show the marriage of the deceased.

4. The ages of children must be shown by certified copies of published records of birth or verified copies of church records of baptisms.

5. Affidavits of two persons must be filed showing that the children of the widow described in the claim are living, and that the widow has not remarried.

581a

Definition of total disability.

"Total Disability" shall be deemed to be "permanent" whenever it is founded upon conditions which render it reasonably certain that it will continue throughout life of the person suffering from it. Whenever it shall be established that any person, to whom any installment of insurance has been paid as provided in Article IV on the ground that the insured has become totally or permanently disabled, has recovered the ability to continuously follow any substantially gainful occupation the payment of installments of insurance shall be discontinued forthwith and no further installments thereof shall be paid so long as such recovered ability shall continue.

Definition of dependency

For the purposes of the War Risk Insurance Act a person is dependent in whole or in part upon another when he is compelled to rely, and the relations

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between the parties are such that he has a right to rely, in whole or in part, on the other for his support.

615a

BIMONTHLY MUSTER DISCONTINUED—NEW REGULATIONS

GENERAL ORDER No. 42, W.D., 1918.

After April 30, 1918, there will be no muster of troops for pay.

The bimonthly muster of troops and the preparation of muster rolls will be discontinued after June 30, 1918. Beginning with July 1, 1918, personnel officers will prepare and forward directly to The Adjutant General of the Army reports of changes in duties and status of officers and enlisted men on blank forms provided for the purpose and in accordance with special regulations relating thereto, now in course of publication.

The provisions of Army Regulations in conflict with this order are suspended, pending the revision of such regulations. (242.5, A.G.O.)

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727a

Form No. 637, A. G. O.
(Ed. Dec. 12-17—2,000,000.)

~~*Regular Army.~~
~~*National Guard.~~
* National Army.
~~*Enlisted Reserve Corps.~~

INDIVIDUAL EQUIPMENT RECORD

CLOTHING ACCOUNT

ARTICLES.	SIZE.	ISSUED.						TURNED IN.					
DATE LOST		1/10/18	4/5/18					4/10/18					
Bags, barrack		1						—					
Belts, waist		1						—					
Blankets		3						—					
Brassards		—						—					
Breeches, cotton	7	—						2					
Breeches, woolen	7	2						—					
Caps, service		—						—					
Chevrons		—						—					
Coats, denim		—						—					
Coats, cotton	1	—						2					
Coats, woolen	1	2						—					
Cords, hat		1						—					
Drawers, cotton	3	—	3					3					
Drawers, woolen	3	3						—					
Gauntlets, winter		—						—					
Gloves	9	1						—					
Hats, denim		—						—					
Hats, service	7	1						—					
Laces leggins		2						—					
Laces, shoe		2						—					
Leggins	2	2						—					
Neckties		—						—					
Ornaments, cap		—						—					
Ornaments, collar		2						—					
Overcoat, O. D	3	1						—					
Overshoes, arctic		—						—					
Ponchos		—						—					
Shirts, flannel	2	2						—					
Shoes, gymnasium		—						—					
Shoes ~~russet~~	8 D	1						—					
Slicker	3	1						—					
Stockings, cotton	9	—						5					
Stockings, woolen	10	5						—					
Suspenders		—						—					
Trousers, denim		—						—					
Undershirts, cotton	2	—	3					3					
Undershirts, woolen	2	3						—					
Shoes Field	10E	2						—					
OFFICER'S INITIALS		R.P.J.						R.P.J.					

Bradish (Surname.) Norman C. (Christian name.)

Pvt. (Grade.) Det. Med. Dept., Base Hosp. No. 26. (Company and regiment or arm or corps or department.)

(11) 3—6357

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727b

QUARTERMASTER PROPERTY ACCOUNT

ARTICLES.	ISSUED.						TURNED IN.			
DATE LINE	4/4/18									
Bar, mosquito	—									
Bedstead, iron	—									
Bugle, with E.M.P.	—									
Cases, pillow	—									
Cot	1									
Covers, mattress	—									
Head net, mosquito	—									
Locker, trunk	—									
Mattress	—									
Overcoat, blanket-lined	—									
Pillow	1									
Pins, tent, shelter	6									
Pole, tent, shelter	1									
Receiver, card, bedstead	—									
Ropes, shelter tent	1									
Sack, bed	1									
Sack, pillow	—									
Sheets, bed	—									
Sling, bugle	—									
Tent, shelter, half	1									
Whistle and chain	—									
SOLDIER'S INITIALS	mcB									
OFFICER'S INITIALS	R.C.J.									

(2)

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727c

ORDNANCE PROPERTY ACCOUNT

Articles.	Issued.						Turned In.			
Date Line	7/11/18									
Mess Equipment: Meat can	1									
Mess Equipment: Cup	1									
Mess Equipment: Knife	1									
Mess Equipment: Fork	1									
Mess Equipment: Spoon	1									
Bandoleer, Cavalry	—									
Bayonet and scabbard	—									
Blanket roll straps	—									
Bolo and scabbard	—									
Brush and thong	—									
Can, bacon	1									
Can, condiment	1									
Canteen and cover	1									
Canteen-haversack strap	—									
Canteen strap, Cavalry	—									
Cartridges, cal.	—									
Cartridges, cal.	—									
Cartridge belt	—									
Cartridge belt and suspender	—									
Front sight cover	—									
Gun sling	—									
Hand axe and carrier	1									
Hatchet and cover	—									
Haversack	—									
Magazines, extra	—									
Magazine pocket	—									
Oiler and thong case	—									
Pack carrier	—									
Pick mattock and carrier	—									
Pick, Cavalry, and cover	—									
Pistol No.	—									
Pistol belt	—									
Pistol holster	—									
Pouch for first aid	—									
Pouch for small articles	—									
Ration bag	1									
Record case, N. C. O.	—									
Revolver No.	—									
Rifle No.	—									
Rifle cover	—									
Rifle scabbard	—									
Rule, 2-foot, folding	—									
Saber and scabbard	—									
Saber knot	—									
Saber straps, pairs	—									
Shovel and carrier	—									
Steel tape, 5-foot	—									
Spurs, pairs	—									
Spur straps, sets	—									
Stock cover	—									
Trench knife and scabbard	—									
Wire cutter and carrier	—									
Horse equipment, complete, horse	—									
Horse equipment, complete, mule	—									
Soldier's Initials	PCB									
Officer's Initials	R.R.J.									

(3) 0 2—5557

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727d

ENGINEER, SIGNAL, MEDICAL PROPERTY ACCOUNT.

Articles.	Issued.						Turned In.			
Date Line	4/11/18									
Compass, watch	—									
Waist belts, M. D.	1									
Canteen hangers	1									
Combs for Instr.	1									
First Aid Packet	1									
Field glasses, Type C	—									
Field glasses, Type EE	—									
Kits, flag, comb., Inf.	—									
Kits, flag, comb., standard	—									
Kits, flag, Artillery	—									
Soldier's Initials	N.C.B.									
Officer's Initials	R.P.J.									

INSTRUCTIONS.

1. When articles of clothing and equipment are issued to an enlisted man they will be entered in the "issue" column, with the date of issue entered in figures (e. g., 10/30/17) on the date line. The column will be initialed by the witnessing officer and, except in the case of issue of clothing, by the soldier, a line being drawn through each blank space in the column by the witnessing officer. When articles are first issued to an enlisted man the sizes that have been determined to be the proper ones will be entered in column headed "sizes."

2. When articles are turned in, lost, or destroyed, they will be entered in one of the columns provided for the purpose, as in case of issues. The officer who receives the articles or records the charge on the pay roll for articles lost or destroyed (paragraphs 685, 686, A. R.) will initial the column, drawing lines through the blank spaces as indicated in paragraph 1.

3. When an individual equipment record form is filled a new one will be started and the old record retained with the individual clothing slips (Q. M. C. Form No. 165) pertaining thereto, until the next inspection by an inspector, after which all filled individual equipment records and clothing slips may be destroyed. When a new equipment record is started the number of articles transferred will be entered in first issue column of new record, and the column initialed as prescribed in paragraph 1.

4. No record will be made of a transaction where an article is turned in and replaced by a like article at the same time.

5. When a soldier is transferred or detached from his company the word "canceled" will be written in columns showing articles issued and turned in to date. The articles which the soldier carries with him, or for which he is indebted to the United States, will then be entered in the next issue column; the column being initialed by the soldier and witnessing officer, as prescribed in paragraph 1. These articles, except clothing and individual mess equipment, will be entered on Form No. 600, A. G. O., as required by paragraph 681–O, A. R. The individual equipment record will be forwarded with the service record to the soldier's new commanding officer.

Bradish Norman C.
(Surname.) (Christian name.)

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730a

Q. M. C. Form 88.

ORIGINAL.
To be sent to Quartermaster General.

Fort McPherson, Ga., April 25, 1918.
(Station.)

The undersigned hereby allots to the Secretary of the Treasury for purchase $50
(Name of allottee.)
Third Liberty Loan Bond, 1 coupon detached
at Washington, D. C.
(Give complete post-office address.)
$ 5.00 *per month, for* 10 *months, commencing the* 1st *day*
of April, *1918, and expiring the* 31st *day of* January, *1919,*
the amount to be deducted from his pay for each month of the stated period.

Richard Roe
(Certifying officer.)
Captain, San. Corps, N.A.

Frank H. Jones
(Signature of allotter.)
Serial No. 804,761

NOTE.—In no case should the soldier's allotment be made to commence with a date prior to his enlistment, or to extend beyond the date of expiration of his term of enlistment. State inclusive dates of allotment period.

Co. Det. Med. Dept., Reg. Base Hosp. No. 26
Jones, Frank H., Private
(Given and rank of allottee.)
June 5, 1917
(Date of enlistment.)

DUPLICATE.
To be retained as record.

Q. M. C. Form 88.

Fort McPherson, Ga., April 25, 1918.
(Station.)

The undersigned hereby allots to the Secretary of the Treasury for purchase $50
(Name of allottee.)
Third Liberty Loan Bond, 1 coupon detached
at Washington, D. C.
(Give complete post-office address.)
$ 5.00 *per month, for* 10 *months, commencing the* 1st *day*
of April, *1918, and expiring the* 31st *day of* January, *1919,*
the amount to be deducted from his pay for each month of the stated period.

Richard Roe
(Certifying officer.)
Captain, San. Corps, N.A.

Frank H. Jones
(Signature of allotter.)
Serial No. 804,761

Allotment discontinued ..... *Request sent to Quartermaster General* July 8/18.
Reason for discontinuance Discharged July 8/18 per C.D.D. 4th Ind. S.E.Dept., July 6/18.

NOTE.—In no case should the soldier's allotment be made to commence with a date prior to his enlistment, or to extend beyond the date of expiration of his term of enlistment. State inclusive dates of allotment period.

Co. Det. Med. Dept., Reg. Base Hosp. No. 26
Jones, Frank H., Private
(Given and rank of allottee.)
June 5, 1917
(Date of enlistment.)

All allotments for Third Liberty Loan Bonds will show on back of form name and address of person to whom the bond will be sent when payments are completed or whether such bond will be held in trust until called for.

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DISCONTINUANCE. (SOLDIER'S ALLOTMENT.)

Co. Det. Med. Dept. Regt. Base Hosp. No. 26
Jones, Frank H., Private
(Name and rank of allotter.)

Fort McPherson, Ga., (Station.), July 8 (Date.), 191 8.

The allotment of Frank H. Jones, Private, Det. Med. Dept., Base Hospital No. 26 (Name of allotter.) (Organization.)

of $5.00 *per month for* 10 *months, commencing* April 1, *191*8

to the Secretary of the Treasury for purchase $50 Third Liberty Loan Bond, 1 coupon detached, (Name of allottee.) (Street and No.)

Washington, D.C., (State.) *is hereby discontinued to take effect* July 1 (Month and date.), *191* 8

Reason for discontinuance Soldier discharged July 8/18 per C.D.D. 4th Ind. S.E.Dept., July 6/18.

At this date the records show the soldier paid to include June 30, *191*8

The allotment has been deducted from his pay to include June 30, *191*8, *but will be continued upon the pay rolls until acknowledgment of this discontinuance is received—as required by Paragraphs 1350 and 1351, A. R., 1913.*

Richard Roe
(Certifying officer.)

Frank H. Jones
(Signature of allotter.) Serial No. 804,761

Captain, San. Corps, N.A.

NOTE.—The discontinuance of an allotment should be made to take effect the last day of a calendar month.

Q. M. C. Form 88.
Authorized April 16, 1918.

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Par. 44, Special Regulations, War Department, 1918, reads as follows:

44. Allotments of Officers and Retired Officers on Active Duty.—(*a*) An officer who does not desire to dispose of his pay accounts as prescribed in Par. 1259, Army regulations, 1913, may make an allotment of any portion of his pay for the support of his family or dependent relatives, for his own savings, or for any other purpose except that of obtaining an advance on his pay, the difference between the amount so allotted and the total pay due to be drawn by the officer at the place where he is serving. This allotment must be in an amount less than the sum of the officer's monthly pay and longevity pay, and the difference between the total pay due him and the amount allotted will be drawn at the station where he is serving on a pay account prepared to cover the total pay due, with the notation "Deduct for allotment $———." All allotments of pay will be paid by the depot quartermaster, Washington, D. C., as they accrue, if the casualty list, stoppage circular, or other report shows no bar to payment.

(*b*) An officer desiring to make an allotment of pay as herein provided will state his allotment on Q.M.C. Form No. 38*a*, which will be forwarded directly to the depot quartermaster, Washington, D. C. Should the allotment form not be available, the officer may make his allotment in the form of a letter reading:

> I hereby allot $——— of my pay per month for ———— months, commencing the 1st day of ———— to ———————— who is my——— and whose address is ————————.

(*c*) Should the officer desire to have the amount of the allotment placed to the credit of his allottee with a bank, he will amplify his letter accordingly, giving the name and location of the bank. This letter should be forwarded in the same manner as is herein provided for the regular allotment form.

(*d*) An officer who has disposed of his pay accounts as prescribed in Par. 1259, Army Regulations, 1913, and who desires to substitute an allotment of pay therefor, should, in forwarding his allotment, request the return of said pay accounts. The pay accounts will be returned by the depot quartermaster through the proper quartermaster where the officer is serving.

(*e*) Should an officer desire to discontinue an allotment prior to the expiration of the period for which originally made, he will notify the depot quartermaster, Washington, D. C., specifying date, which will be the last day of a month on which he desires the discontinuance to take effect. This notification will be sent directly to the depot quartermaster, Washington, D. C., and when practicable will be mailed sufficiently in advance of the date of discontinuance to insure receipt by the depot quartermaster before said date. In case there is any doubt as to the discontinuance being received through the mails prior to the date specified therein, the officer, at the time of mailing the discontinuance, will notify the depot quartermaster by telegraph of the date of discontinuance, such telegram to be paid for by the officer. The depot quartermaster will acknowledge receipt of all requests for discontinuance of officer's allotments, and officers will continue to deduct from their monthly pay the amount allotted until receipt of such acknowledgment. When this acknowledgment from the depot quartermaster has been received and it is found that the allotment has been withheld for any month or months beyond the date of discontinuance, as specified by the depot quartermaster, Washington, D. C., the officer will take credit on his next succeeding monthly pay account for the amount so withheld beyond the date of actual discontinuance.

(*f*) It shall be the duty of the immediate commanding officer of any officer who assumes a status which deprives him of pay to ascertain whether the officer has an allotment; and if so, to report the matter to the commanding general of the department or forces with which the officer is serving, who will notify The Adjutant General of the Army by telegraph to discontinue allotment, or to suspend further payments if the facts do not call for total discontinuance.

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PREPARATION AND DISPOSITION OF APPLICATIONS FOR ALLOTMENTS AND INSURANCE AND FOR CHANGES AND DISCONTINUANCE OF ALLOTMENTS

(Special Regulations No. 72, War Dept.)

Preparation of Forms and Channels of Transmittal.—Forms for allotments of pay and applications for family allowances and insurance of enlisted men will be filled out and signed in duplicate under the supervision of the company or detachment commander, who will forward the originals to the division, department, port of embarkation, or recruiting depot commander, as the case may be, retaining the duplicates for file with the records of the company or detachment. The division or other commander to whom the original applications are forwarded will cause them to be carefully examined, and unless found to be incomplete or improperly executed, will transmit them directly, except as hereinafter indicated, with letter of transmittal giving the name, rank, and organization of each applicant, to the Bureau of War Risk Insurance, Washington, D. C., or to the depot quartermaster, Washington, D. C., in case of Class E allotments. (See par. 45.) When an application is incomplete or improperly executed, it will be returned to the company or detachment commander for correction before transmittal to the Bureau of War Risk Insurance or to the Quartermaster General. The necessary changes will be made on both the original and duplicate copies. In the case of the American Expeditionary Forces in Europe, the war risk insurance forms will be filled out and signed in triplicate, the original and one copy to be forwarded through the division commander to the commanding general, American Expeditionary Forces, who will transmit the original directly to Bureau of War Risk Insurance, Washington, D. C., retaining the copy for file at his headquarters. Allotment blank forms, 1B, Bureau of War Risk Insurance, will be made out for every enlisted man entering the service of the United States whether he has dependent relatives or not. A man who has no dependents will be required to sign and execute the form, filling in the word "None" in the proper spaces. Form No. 38, Quartermaster Corps, will be used in stating Class E allotments, but if such form is not available, the allotment may be made by letter (Par. 45). War risk insurance forms will be used in all other cases. Allotments of permanent civilian employees will be prepared on Form No. 38, Quartermaster Corps, and forwarded to division or other commander, as prescribed for Class E allotments of enlisted men.

Report of Commanders Upon Arrival Overseas.—When troops arrive overseas, a report will be made to the commanding general, American Expeditionary Forces, by the commanding officer showing the number of officers and enlisted men that have not submitted applications for insurance or family allowance under the war risk insurance act. Organizations will not be required to furnish to any headquarters or war risk section in France any copy of insurance or allotment applications executed prior to leaving the United States.

Scrutiny of Application Before Transmittal.—Before witnessing a Class E allotment the company or detachment commander will satisfy himself that the allotment is not made for the purpose of obtaining an advance of the soldier's pay. When a bank is designated as allottee, the company or detachment commander will furnish the bank with the signature of the grantor, and also inform the bank of the amount and period of allotment. Such commanding officer will also, if possible, satisfy himself that the bank named has an existence.

Action in Case of Change of Pay of Enlisted Man or Status of Beneficiary.—In case a change of a dependent relative or beneficiary affects the allotment (Class A or B), the family allowance, or the insurance the company or detachment commander will cause a form to be prepared and fowarded as hereinbefore provided for original applications, showing plainly thereon that such application is an amendment to application previously forwarded, marking the new form in a conspicuous place with the word "Change." (See Par.

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10.) New applications will not be forwarded in case of changes in pay status of enlisted men, the amounts shown on the abstracts of allotments furnishing all necessary information to the Bureau of War Risk Insurance.

Transmittal of Application for Insurance of Officer.—The original application of an officer for insurance will be forwarded through the division or other commander to the Director of the Bureau of War Risk Insurance, Washington, D. C. Instructions for preparation and disposition of forms for allotment of pay of officers are contained in Par. 44.

Third Parties Making Application for Insurance.—Third parties cannot make insurance applications without authorization by officer or enlisted man making such person his agent in applying for such insurance. This ruling will require that in those cases in which the third parties have applied for such insurance the officer or enlisted man must, by formal or informal writing, authorize such person as his agent. Subsequent ratification is equivalent to previous authorization. (Opinion of the Attorney General of the United States.)

Discontinuance of Allotments.—Discontinuance of allotments under the war risk insurance act will be made by letter or by use of such form as may be provided for the purpose, such discontinuance to be sent through the division or other commander to the Bureau of War Risk Insurance, but Q.M.C. Form No. 39 will not be used for this purpose. Class E allotments (see Par. 48) will be discontinued on Q.M.C. Form No. 39, which will be forwarded direct to the depot quartermaster, Washington, D. C.

Notification of Action Taken on Application.—Notification of action taken by the Bureau of War Risk Insurance with respect to war risk allotments, family allowances, and insurance applications will be sent to the division or other commander from whom the original applications were received, and by the latter transmitted through the company or detachment commander to the individual applicant, proper notation being made on the retained copies of the application. Notification of action taken on discontinuance of Class E allotments will be forwarded by the Depot Quartermaster, Washington, D. C., directly to company or detachment commanders in case of enlisted men, and in case of officers will be sent directly to such officer. (See Par. 48.)

Notation Made on Service Record.—War risk allowances and insurance premiums will be entered on page 7 of the soldier's service record in space provided for "Clothing settlements. On separate lines, the following notations will be made, leaving a vacant line under each notation to allow for notice of discontinuance:

Class A allotment, $———— per month.
Class B allotment, $———— per month.
Government insurance premiums, $————per month.
Private insurance premiums, $———— per month, as the case may be. Class E allotments will be entered in space provided for allotments at the bottom of page 7, interpolating the words "Class E" before "Allotments" in the heading.

Transmittal of Record in Case of Transfer.—When an enlisted man is transferred or detached from his company, all papers pertaining to his allotments or insurance will be forwarded with the service record to his new company or detachment commander, a list of the papers so forwarded being entered on the retained copy of the indorsement on the service record. When any person, other than an enlisted man or a commissioned officer, having an allotment running, is transferred, the papers relating to such allotment will be forwarded with letter of transmittal to the new station of its allotter.

Allotments of Enlisted Men, Retired Enlisted Men on Active Duty, and Permanent Civilian Employees.—An enlisted man and a retired enlisted man on active duty wherever located, and a permanent civilian employee of the War Department about to embark for service beyond the sea, or already on over-sea service, may make an allotment of any portion of his pay remaining after deductions are made in compliance with the war risk insurance act, for his own savings, or for any other purpose, excepting that of obtaining an advance on his pay. (See Par. 10).

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Allotments to Run for Persons Missing or Captured by the Enemy.—In cases of the capture by the enemy of officers, enlisted men, or permanent civilian employees, and officers, enlisted men, and permanent civilian employees who are missing, and who have made allotments under this section of these regulations, which may expire after their capture, or after they are reported missing, the monthly payments of the same shall be continued until otherwise ordered by the Secretary of War.

Report of Death of Payee of an Allotment.—Upon receiving information of the death of any person to whom an allotment is payable by him, the quartermaster properly designated to pay this allotment shall at once report this fact to the grantor's immediate commanding officer.

Discontinuance of Allotment Before Expiration of Period.—When an enlisted man, or permanent civilian employe, who has made a Class E allotment desires to discontinue it prior to the expiration of the period for which it was granted, the company or detachment commander will prepare a request for discontinuance of allotment (Q.M.C. Form No. 39) in duplicate, and forward the original directly to the depot quartermaster, Washington, D. C., retaining the duplicate for file with the records of the company or detachment office. If Q.M.C. Form No. 39 is not available, allotment may be discontinued by letter forwarded by the grantor's immediate commanding officer. The month for which the last payment is to be made will be specified in the request, but the stoppage of pay to meet the allotment should be continued until receipt from the depot quartermaster, Washington, D. C., of acknowledgment of request for discontinuance. If, on receipt of the request for discontinuance of the allotment, payment thereon has been made beyond the month specified, the depot quartermaster, Washington, D. C., in making acknowledgment, will state the date to which the allotment has been paid, and authorize the repayment to the grantor of any pay deducted in excess of the payment of allotment.

When an allotment is to run for the full period for which granted, no request for discontinuance or notice of expiration is necessary. (See Par. 15).

Renewal of Discontinued Allotment.—When an allotment is discontinued, at the request of the person making it, before the expiration of the term for which it is granted, it shall not be renewed, but a new allotment form may be executed and forwarded, constituting a new allotment.

DISCONTINUANCES OF ALLOTMENTS

243.5. ADJUTANT GENERAL'S OFFICE, WASHINGTON, November 19, 1917.

Allotments for liberty loan bonds will be discontinued on the last day of the month immediately preceding that month in which the allotter dies, deserts or is discharged. If death, desertion or discharge occurs on the last day of any month, the allotment will cease on that date. It is desired to avoid deduction of fractional parts of such allotments.

Regular discontinuances form, reciting dates when allotments shall cease, as indicated herein, will be promptly prepared and mailed to the Quartermaster General of the Army in every instance. This form will, in all cases, state name of bank in whose favor the allotment was made.

The names of the grantors, whose allotments thus cease, will be promptly reported as required by paragraph 1350 A. A., 1913. In view of law recently enacted, that allotments shall be paid as they accrue, telegraphic reports will be made of separation from the service where such separation occurs too late in any month to permit mail report to reach the Quartermaster General of the Army by the end of that month.

IN CASE OF DEATH, DISCHARGE OR DESERTION, REPORTS REQUIRED FOR ADJUTANT GENERAL

(Tel. A.G.O., Dec. 12/17.)

"The death, discharge, or desertion of a soldier having an allotment in favor of dependents of Class A or Class B or insurance will be reported by his immediate commanding

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officer to The Adjutant General of the Army if in the United States and to the Department Adjutant if serving in the Philippine, Hawaiian or Panama Canal Departments, and to the Adjutant of the American Expeditionary Forces if serving therewith. Reports will be made in the manner necessary to reach The Adjutant General before the end of the month. Copy of the report will be furnished War Risk Officer of the command. In case of allotments charged on final statements, proportionate deduction will be made."

In making reports, under the order quoted above, organization commanders will give the following information as to each man reported: (1) Name of man. (2) His organization. (3) Cause of separation from service. (4) Date of separation from service.

ALLOTMENTS UNDER G.O.W.D. 45, 1914, ABSENCE WITHOUT LEAVE AND AS AFFECTED BY COURT-MARTIAL

That portion of a soldier's pay which he is compelled to allot for the support of his wife and children under the War Risk Insurance Act, is not affected by a court-martial sentence. That portion of a soldier's pay which is voluntarily allotted is not beyond the power of a court-martial to forfeit. (Decision J.A.G., March 30, 1918.)

Stoppage of pay because of absence without leave is imposed as a penalty and stands upon the same basis as forfeitures decreed by sentence of court-martial. Consequently such stoppage of pay is junior to the compulsory allotment and cannot affect such allotment. (Decision J.A.G., March 1, 1918).

The Act of April 27, 1913 (38 Stat. 351, 353), upon which G.O., 45, W.D., 1914, is based provides as follows: "That hereafter no officer or enlisted man in active service, who shall be absent from duty on account of disease resulting from his own intemperate use of drugs, or alcoholic liquors, or other misconduct, shall receive pay for the period of such absence, the time so absent and the cause thereof to be ascertained under such procedure and regulations as may be prescribed by the Secretary of War." The stoppage or forfeiture of pay herein involved differs materially from a forfeiture imposed by sentence of a court-martial. A court-martial has no power to dispose of any property of an enlisted man which Congress has already disposed of. Therefore, when Congress disposes of a percentage of a man's pay by compulsory allotment, that percentage is beyond the power of a court-martial to forfeit. Reasonably interpreted the above-mentioned statute requires the forfeiture of all pay, whether allotted or not, for absence caused by misconduct of the kind specified. (Op. Q.M. Dept., Letter A.G., 3/25/18).

In all cases of absence without leave or absence under G.O. 45, 1914, the simplest and most expeditious way to adjust the matter is to continue on pay rolls all notations as to stoppages on each succeeding roll until there is a balance due the soldier over and above all allotments and other charges. In cases, however, where the Organization Commander has reasons to believe that the soldier will not return to pay status, he should take such steps as will protect the Government by discontinuing any voluntary allotments that the soldier may have running and under Special Regulations 72, the Organization Commander should, under these circumstances, advise the Bureau of War Risk Insurance in order that it may, if it is thought necessary suspend temporarily the payment of the allotment. (Letter A.G., March 25, 1918).

ALLOTMENTS IN EXCESS OF AMOUNT REQUIRED

Allotments made to dependents of Class A or Class B under the Act of October 6, 1917, in excess of amount required to support the family allowance claim, should be made on Form 38, which should be forwarded to the Quartermaster General's office and same should be stated on the payrolls as Class E allotments.

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LETTER FROM QUARTERMASTER GENERAL, U. S. ARMY RELATIVE TO ERRONEOUS ALLOTMENT ON FORM 1B

OFFICE OF THE QUARTERMASTER GENERAL, WASHINGTON, MAY 1, 1918.

Only allotments to persons in the permitted classes should be made on the Form 1B. The permitted classes include the following relationships:

CLASS A.—Wife, child, divorced wife who has not remarried and to whom alimony has been decreed.

CLASS B.—Dependent father, mother, grandfather, grandmother, stepfather, stepmother, either of soldier or his wife; also, dependent brother, sister, half brother, half sister, stepbrother, stepsister, adopted brother, adopted sister, and grandchild of the soldier.

Allotments.—To all other relatives, persons, or institutions should be made on Q.M.C. Form 38, including allotments to purchase Liberty Bonds. Pending a reply to this letter, the Form 1B will be held in this office, and no payments can be made to the allottee.

In order to make prompt payments to the allottee on account of the Form 1B which was submitted to the Bureau of War Risk Insurance, and on which no payments have been made, you are requested to immediately have the soldier execute Q.M.C. Form 38. This form should be executed to show the allotment beginning on the first of the month following the month in which the Form 1B was executed, and if any prorated amount has already been withheld, it should be re-credited the soldier on the next pay roll. Should through error no amounts have been deducted on account of the Form 1B, the Q.M.C. Form 38 should begin the first of the current month. If the amounts deducted on account of the Form 1B have already been refunded, the Q.M.C. Form 38 should begin on the first of the current month, provided the soldier still desires to make an allotment. If the soldier has been discharged, Form 38 should show the amount withheld on account of the allotment and the *date of discharge.*

In order to prevent confusion, this Form 38 should be plainly marked "Almt. in place of Form 1B;" and should be forwarded to the Quartermaster General with this letter.

By authority of the Acting Quartermaster General:

CHILDREN IN CUSTODY OF DIVORCED WIFE—COMPULSORY ALLOTMENT

BUREAU OF WAR RISK INSURANCE, DECEMBER 20, 1917.

The Act of October 6, 1917, stipulates no condition, except waiver or exemption under Section 201, upon which the children of an enlisted man may be deprived of their right to an allotment from his pay. This is in direct contrast to the right of a wife; for in Section 201 it is expressly provided that where the wife is divorced the allotment for her shall not exceed the amount specified in the decree to be paid to her. As to a divorced wife, therefore, the right to a share in the enlisted man's pay is terminated upon the issuance of a decree awarding no alimony. The Act contains no such limitation, however, with respect to the rights of the children, and such limitation should not be imposed unless the Act plainly requires it. It should be further noted that the basis of the right to an allotment is essentially one of relationship, and that while the relationship of husband and wife may be terminated by law the relationship of father and child cannot.

The enlisted man must make a compulsory allotment for his children in the circumstances stated, unless the allotment is waived or an exemption is granted under Section 201 of the Act.

Section 201 of the Act of October 6, contains the provision, with reference to the compulsory allotment, that

"On the enlisted man's application or otherwise for good cause shown, exemption from the allotment may be granted upon such conditions as may be prescribed by regulations."

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Section 13 contains the provision that

"Whenever under any provisions or provision of the Act regulations are directed or authorized to be made, such regulations, unless the context otherwise requires, shall or may be made by the director, subject to the general direction of the Secretary of the Treasury."

Under the authority conferred by the foregoing provisions of the Act, the following regulation is issued relating to exemption from the compulsory allotment for children where they are in custody of wife and no alimony is granted for their support, under Section 201 of the Act of October 6, 1917.

Where an enlisted man is divorced from his wife and in the decree the divorced wife is given custody of the children but no alimony is granted for the support either of the wife or of the children, the enlisted man may, upon application to the Bureau, be exempted from the compulsory allotment. The application shall state the name and address of the divorced wife and the names and addresses of the children and shall be supported by evidence showing good cause, including a certified copy of the divorce decree and such other information as the Bureau may require.

ALLOTMENTS AND FAMILY ALLOWANCES—PRORATING

BUREAU OF WAR RISK INSURANCE, JANUARY 5, 1918.

By virtue of the authority granted in Section 13 of the Act of October 6, 1917, the following regulation is issued relative to the prorating of allotments and family allowances for periods less than a month when certain events happen within the month.

1. **Compulsory Allotments.**—If a man enlisted into or discharged from or die in the military or naval service of the Unitd States within any month the compulsory allotment to be made from his payroll shall be prorated in accordance with the government salary table. Upon the happening within any month of any event which gives rise to, or terminates, or increases or decreases the obligation to make a compulsory allotment, the the compulsory allotment shall be prorated as above according to the number of days in the month that the obligation (or the increased or decreased obligation) to make a compulsory allotment existed.

2. **Voluntary Allotments.**—When a man is enlisted into or discharged from or dies in the military or naval service of the United States within any month and makes a voluntary allotment to begin with the date of his enlistment, or to continue to the date of his discharge or death, the voluntary allotment to be made from his pay shall be prorated in accordance with the government salary table. If the enlisted man was in the service on the first day of the month in which he makes a voluntary allotment, the allotment shall begin on the first day of that month unless he specifies that it shall begin on the first day of a succeeding month.

3. **Family Allowances.**—In every case where the allotment (either compulsory or voluntary) is prorated the family allowance shall be prorated in like manner. But nothing herein shall interfere with the payment of the family allowance for one month after the enlisted man is discharged from the service as provided in Section 204.

ALLOTMENT FOR CLASS B: REPEAL OF EXEMPTION

By virtue of the authority conferred in Section 13 of the Act of October 6, 1917, regulation No. 1 (T.D. 4, W.R.), entitled "Allotment for Class B—Exemption," and reading as follows, is hereby repealed:

If the sum of the compulsory allotment for Class A and the allotment for Class B would be in excess of 80 per cent. of his monthly pay, the enlisted man shall be automatically exempted, without application therefor, from the allotment for Class B in an amount equal to such excess. (Regulation No. 6, Jan. 8, 1918, T.D. 12, W.R.)

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ALLOTMENT FOR CLASS B: EXEMPTION FROM ALLOTMENT AS A CONDITION TO THE FAMILY ALLOWANCE

By virtue of the authority conferred in Sections 13 and 206 of the Act of October 6, 1917, the following regulation is issued concerning exemption from the allotment for Class B as a condition to the family allowance:

An enlisted man who is making a compulsory allotment for Class A shall, as a condition to securing the family allowance for Class B, be required to allot for Class B one-seventh of his monthly pay, but not less than $5, and shall be automatically exempted without application, from any further allotment for Class B. (Regulation No. 7, Jan. 14, 1918, T.D. 13 W.R.)

ALLOTMENT FOR CLASS B: EXCESS OVER AMOUNT NECESSARY AS A CONDITION TO THE FAMILY ALLOWANCE

By virtue of the authority conferred in Section 13 of the Act of October 6, 1917, the following regulation is issued relative to the amount of the monthly allotment for Class B to be considered in determining whether the limitation in Section 207 (b) as to habitual contributions has been exceeded:

In determining whether the total monthly allowance added to the monthly allotment for Class B is in excess of the average sum habitually contributed monthly by the enlisted man to his dependents, only so much of the monthly allotment shall be considered as is necessary as a condition to the family allowance; and any excess allotment over the amount necessary as a condition to the family allowance shall be transmitted to the dependents as an additional contribution by the enlisted man. (Regulation No. 8, Jan. 29, 1918, T.D. 15. W.R.)

RULES FOR APPORTIONMENT

BUREAU OF WAR RISK INSURANCE, JANUARY 29, 1918.

By virtue of the authority conferred in Section 13, of the Act of October 6, 1917, the following regulation is issued relative to the apportionment of the allotment for Class B and the family allowance, under Section 208 of the Act of October 6, 1917.

1. **Rule of Apportionment.**—Whenever as indicated below an allotment or a family allowance is to be apportioned among the members of Class B the apportionment shall be on the basis of two shares for a parent and one share for each brother, sister, or grandchild. The total number of shares divided into the amount of the allotment or of the family allowance, as the case may be, will give the amount of each share.

2. **Apportionment of Allotment.**—(*a*) If the enlisted man makes an allotment for Class B and designates to whom the same shall be paid the allotment shall be paid as designated by him. (*b*) If the enlisted man makes an allotment for Class B but does not designate to whom the same shall be paid the allotment shall be apportioned among the members of Class B according to the rule of apportionment above.

3. **Apportionment of Family Allowance.**—(*a*) If the allotment for Class B (whether made in a lump sum or otherwise) is sufficient to secure a family allowance for all persons for whom a family allowance is claimed, the total of the family allowance granted shall be apportioned among the named dependents of Class B according to the rule of apportionment above.

(*b*) If the allotment for Class B is made in a lump sum and is at least $15, but less than one-half of the enlisted man's monthly pay, and is not sufficient to secure the family allowance for all persons for whom a family allowance is claimed, the allotment shall be considered made in the manner most effective for securing family allowances; provided that the sum of the family allowance that may be granted as specified in Section 204 does not exceed the total sum allotted, subject however to the limitations of Section 207. The

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family allowance granted shall be apportioned among the named dependents in Class B according to the rules of apportionment above.

(c) If individual allotments are made for the several members of Class B and the sum of the allotments is at least $15, but less than one-half of the enlisted man's pay monthly and if any of the individual allotments is less than the corresponding family allowance (as specified in Section 204) for the individual member for whom a family allowance is claimed, the total allotment shall be considered made in the manner most effective for securing family allowances; provided that the sum of the total family allowance that may be granted as specified in Section 204 does not exceed the total sum allotted, subject however to the limitations of Section 207. The family allowance granted shall be apportioned among the named dependents in Class B according to the rule of apportionment above.

Approved by the Secretary of the Treasury.

EXEMPTION FROM ALLOTMENT

ADJUTANT GENERAL'S OFFICE, WASHINGTON, FEB. 27, 1918.

When an enlisted man claims exemption, under Section 201 of the Act of Congress, approved October 6, 1917, from compulsory allotment he should furnish the following information:

(1) Applicant should give full name, rank, and organization.

(2) Give home address if this differs from the place of enlistment.

(3) If married give name of wife, date and place of marriage.

(4) Give wife's maiden name.

(5) State how long they have lived together, and last address.

(6) Give wife's present address if known, if not, last known address or some means of communicating with her. (This is essential to avoid delay in determining application.)

(7) If children, names and ages and their address. State in whose custody they are.

(8) Give the name and addresses of the wife's parents.

(9) Give a brief statement of reasons why exemption is claimed. State facts, not surmises or suspicions.

(10) Give names and address of several witnesses who will substantiate the facts on which the claim for exemption is founded.

(11) Swear to, before an officer authorized to administer oaths.

ALLOTMENTS NOT PRORATED ON CHANGE OF PAY

If an enlisted man is making an allotment for Class A or for Class B, or for both, and his rate of pay is changed within the month the allotment for such month shall not be prorated but shall be computed on the basis of monthly pay at the lowest rate payable to the enlisted man at any time during the month in which the change occurred.

In so far as the foregoing regulation is inconsistent with Regulation No. 5 (T.D. 11, W.D.) relative to the prorating of allotments the said Regulation No. 5 is hereby modified.

WAR RISK ALLOTMENTS OF PERSONS MISSING OR CAPTURED BY THE ENEMY

1. "In case of the capture by the enemy of officers, enlisted men or permanent civilian employees, and officers, enlisted men and permanent civilian employees who are missing and who have made allotments under this section of these regulations, which may expire after their capture or after they are reported missing, the monthly payments of the same shall be continued until otherwise ordered by the Secretary of War."

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2. This provision applies exclusively to the allotments paid under the Act of March 2, 1899, as amended, and does not apply to the War Risk Insurance Act of October 6, 1917.

3. In the case of enlisted men missing or captured, there can be no actual withholding of pay unless the men return to duty, but there can be constructive withholding, and in case of failure to be returned to active service, in the settlement of their accounts the amounts constructively withheld can actually be deducted from their accrued pay and transferred to the Treasury Department under settlement by the Auditor. On this assurance, the payment of allotments and family allowances will be continued until notice is given to the Bureau of War Risk Insurance that the payment of such allotments and allowances shall be discontinued.

DEPENDENCY

BUREAU OF WAR RISK INSURANCE, FEB 8, 1918.

By virtue of the authority conferred in Section 13 of the War Risk Insurance Act, the following regulation is issued relative to the applicability of the limitation as to habitual contribution in Section 207 (*b*) of the War Risk Insurance Act.

1. **Dependency Arising Prior to Both Enlistment and October 6, 1917.**—If the member of Class B, for whom an enlisted man makes a monthly allotment in accordance with Section 206 and claims a family allowance, became dependent in whole or in part on the enlisted man prior to both enlistment and October 6, 1917, the limitation as to habitual contribution in Section 207 (*b*) is applicable and the average sum habitually contributed by him monthly may be computed as of the period (not exceeding one year) of dependency immediately preceding his enlistment or immediately preceding October 6, 1917, whichever period the enlisted man prefers.

2. **Dependency Arising Prior to Enlistment or October 6, 1917, but not Prior to Both.**—If the member of Class B, for whom the enlisted man makes a monthly allotment in accordance with Section 206 and claims a family allowance, became dependent in whole or in part on the enlisted man prior to enlistment or prior to October 6, 1917, but not prior to both, the limitation as to habitual contributions in Section 207 (*b*) is applicable, and the average sum habitually contributed by him monthly shall be computed as of the period (not exceeding one year) of dependency immediately preceding his enlistment or immediately preceding October 6, 1917, as the case may be.

3. **Dependency Arising Subsequently to Both Enlistment and October 6, 1917.**—If the member of Class B, for whom the enlisted man makes a monthly allotment in accordance with Section 206 and claims a family allowance, becomes dependent in whole or in part on the enlisted man subsequent to both enlistment and October 6, 1917, the limitation as to habitual contributions in Section 207 (*b*) is not applicable, and family allowances will be paid without regard to such limitation.

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Par. 23, Special Regulations, War Department, 1918, reads as follows:

23. **Allotments and Insurance Premiums of Officers.**—Commissioned officers will note on their monthly pay accounts the amounts of Class E allotments and allotments for insurance premiums (Class C and Class D) in the following manner:

(*a*) Allotments other than for the payment of insurance premiums: "Deduct for allotment $————;"

(*b*) Premium on Government insurance: "Deduct for insurance premium $———;"

(*c*) Allotments to the Bureau of War Risk Insurance for the payment of premium on insurance in private companies, societies, and associations: "Deduct for allotment for private insurance premium $————."

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